Department of the Interior
Bureau of Land Management
Salem District
1717 Fabry Rd. SE
Salem, Oregon 97306

FY2001 Salem District Annual Program Summary, Plan Maintenance and Monitoring Report

As the Nation's principal conservation agency, the Department of Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

The cover photo for the Annual Program Summary is dedicated to our national effort to recover, restore, rebuild, heal and grow in the wake of the events on September 11, 2001. There are three components of the photo which make it appropriate for use. The flag is a national symbol of our unity, our shared history and our dedication to the American spirit. The Willamette River is a major environmental feature of northwest Oregon. As the Willamette River reflects the integrated nature of the entire watershed, BLM is emphasizing partnerships to integrate our efforts with those of others to restore all aspects of the region. The third component is the trees and other vegetation surrounding the river. It is an appropriate symbol of BLM's continuing emphasis in excellence in forest ecosystem management.

SALEM DISTRICT ANNUAL PROGRAM SUMMARY
RESOURCE MANAGEMENT PLAN MAINTENANCE, and
MONITORING REPORT

Table of Contents

List of Tables

List of Appendices

Executive Summary

The Annual Program Summary (APS) is the District's report on how it has implemented the Salem District Record of Decision and Resource Management Plan (ROD/RMP) during the past fiscal year. In addition to reporting RMP progress, the APS documents the RMP maintenance that has been accomplished to date and summarizes the results of the district implementation monitoring. The Annual Program Summary (APS) addresses the accomplishments of the Salem District in such areas as watershed analysis, Jobs-in-the-Woods, silviculture, wildlife, forestry, recreation, and land tenure adjustments. It also provides information concerning the Salem District budget, timber receipt collections, and payments to the counties in the District .

During fiscal year 2001, the Salem District implemented a wide variety of programs called for under the Resource Management Plan (RMP). While the District's ability to fully implement the timber sale component of the RMP has been limited by ongoing litigation, the broad scope, complexity and diversity of land and resource management programs summarized in the APS should be noted. These include forest harvest and management treatments, watershed analysis, habitat restoration, recreation, fire prevention, and road maintenance and improvements.

The Salem District offered 11.1 million board feet (MMBF) for sale during fiscal year 2001. With the addition of smaller negotiated timber sales, the total timber volume offered increases to 12.5 MMBF. This was considerably below the Salem District Allowable Sale Quantity of 34.8 MMBF. Unresolved litigation and uncompleted strategic surveys under Survey and Manage have limited the ability to offer timber sales at the levels anticipated by the RMPs during fiscal year 2001 and prior years. It is not possible at this time to accurately predict the duration or effect of these short term uncertainties on the long term ability to implement the underlying assumptions that form the basis of the Allowable Sale Quantity. Therefore, changes to the RMP based on the inability to implement timber resources decisions and assumptions in fiscal year 2001 would be premature at this time. These circumstances will be more closely examined during the next RMP evaluation.

The Salem District recreation, wildlife habitat and endangered species programs focused on building partnerships to increase effectiveness and efficiency of programs. The District matched $164,000 with $837,000 in non-federal funds to support a variety of initiatives. Volunteers contributed more than 42,000 hours of labor. Their contributions have a value of $275,000. The Salem District hosted the American Heritage River initiative for the Willamette River. This initiative brought $420,000 to Willamette River related needs.
'Recreation Pipeline' funds are providing for much needed repairs and improvements at District recreation sites. Road erosion and stabilization and stream channel restoration projects are funded through 'Jobs-in-the-Woods' and related funds.

Plan Maintenance identifies the revisions to the Salem District Resource Management Plan which have occurred since publication of the previous APS. Specifically, it includes a description of the changes associated with the recently signed Record of Decision (ROD) for the *"Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines".* The ROD amends portions of the Salem District RMP regarding the standards and guidelines for the Survey and Manage Program. The ROD does not change the underlying purposes of the Northwest Forest Plan and does not make changes to other elements of the Plan. This portion of the report also identifies a change to the plan evaluation schedule from three years to five years.

The Monitoring Report compiles the results and findings of Salem District Resource Management Plan (RMP) implementation monitoring for fiscal year 2001. The District completed implementation monitoring on timber sales, silvicultural projects road improvements, riparian projects, a noxious weed project and a project in a recreation site. Many projects surveyed fully met all applicable monitoring questions. Overall, Salem District fully met RMP standards for 96% of the applicable monitoring questions. Discrepancies applicable to riparian reserves, cultural resource surveys, activities in late-successional reserves and aquatic conservation objectives were identified. In all cases with discrepancies, very limited or no adverse environmental impacts were noted. Corrective actions have been implemented to preclude future occurrences.

This “Annual Program Summary” gives only a very basic and brief description of the programs, resources, and activities that the Salem District is involved with. This report does give the reader a sense of the enormous scope, complexity, and diversity involved in management of the Salem District public lands and resources. Although there are and will continue to be challenges that require BLM to adapt and give our best, the managers and employees of Salem District take pride in the accomplishments described in this report.

Table 1 - SALEM-BLM,
SUMMARY OF RENEWABLE RESOURCE MANAGEMENT ACCOMPLISHMENTS

RMP Management Activity	Fiscal Year 2001 Accomplishments	Cumulative Accomplishments 1995-2001	Projected Decadal Practices
Regeneration Harvest (acres offered)	0	1,956	5,558
Commercial Thinning / Density Management /Uneven-age Harvests (acres offered)	597	3,756	9,113
Site Preparation - Burning(acres)	229	1,622	4,800
Site Preparation - Other (acres)	334	2,955	5,900
Plantation Maintenance / Animal Damage Control (acres)	3,080	19,276	31,300
Pre-commercial Thinning (acres)	1,962	10,453	29,700
Brush Field / Hardwood Conversion (acres)	0	55	900
Planting / Regular Stock (acres)	490	2,790	4,800
Planting / Genetically Selected (acres)	212	1,199	4,500
Fertilization (acres)	0	4,645	6,000
Pruning (acres)	0	350	None
New Permanent Road Constructed (miles*)	1.5	15.4	5
Roads Fully Decommissioned / Obliterated (miles *)	26	85.9	No Target
Roads Closed / Gated (miles**)	16.1	169	No Target
Timber Sale Quantity Offered (million board feet)***	11.1	153.4	348.1
Timber Sale Quantity Offered (million cubic feet)	1.8	25.3	57
Noxious Weed Control, Chemical (sites/acres)	0/0	1-Jan	As Needed
Noxious Weed Control, Other (sites/acres)	9/102	30/456****	As Needed

* BLM administered lands only

** Roads closed to the general public, but retained for admininstrative or legal access

*** Volume reported from the signing date, May 1995 to present.

**** numbers reflect multiple treatments to selected sites over time

Table 2 - SALEM-BLM,
SUMMARY OF NON-RENEWABLE RESOURCE MANAGEMENT ACCOMPLISHMENTS

RMP Management Activity	Activity Units	Fiscal Year 2001 Accomplishments	Cumulative Accomplishments 1995-2001
Realty, Land Sales	actions / acres	0 / 0	16 / 15.82
Realty, Land Exchanges	actions / acres acquired / acres disposed	0 / 0 / 0	7 / 4,524 / 2,241
Realty, R&PP Leases/Patents	actions	0	4
Realty, Road Easements Acquired for Public / Agency Use	actions	3	20
Realty, Road Rights-of-Way, Permits or Leases Granted	actions	8	15
Realty, Utility Rights-of-Way Granted (linear / areal)	actions	4	25
Realty, Withdrawals Completed	actions / acres	0	0
Realty, Withdrawals Revoked	actions / acres	0	1/16
Mineral / Energy, Total Oil and Gas Leases	actions / acres	0	0
Mineral/Energy, Total Other Leases	actions / acres	0	0
Mining Plans Approved	actions / acres	0	0
Mining Claims Patented	actions / acres	0	0
Mineral Material Sites Opened	actions / acres	0	0
Mineral Material Sites, Closed	actions / acres	0	0
Recreation, Maintained Off Highway Vehicle Trails	units / miles	1 / 25	5 / 150
Recreation, Maintained Hiking Trails	units / miles	12 / 75	42 / 300
Recreation, Maintained Sites	units / acres	18 /1,500	N/A*
Cultural Resource Inventories	sites / acres	0 / 862	17 /10,871
Cultural / Historic Sites Nominated	sites / acres	0 / 0	0 / 0
Hazardous Material Sites	identified / cleaned	2 / 2	30 / 24
* Same sites maintained annually - no cumulative number			

Annual Program Summary

INTRODUCTION

This Annual Program Summary (APS) is a review of the programs and accomplishments on the Salem District Bureau of Land Management for the period October 2000 through September 2001, or fiscal year 2001. Programs are implemented under the authority and guidance of the Salem District Resource Management Plan (RMP) which was approved in May 1995. Fiscal year 2001 represents the fifth fiscal year of RMP implementation.

The Resource Management Plan directs that the Annual Program Summary (APS) will track the progress of plan implementation, state the findings made through monitoring, specifically address the implementation monitoring questions posed in each section of the Monitoring Plan and serve as a report to the public. The different sections of the APS reflect the different purposes of the document. The information in the APS and Monitoring Report is different and both documents should be reviewed to get a complete picture of District programs and their progress. The APS provides information about the progress of plan implementation. The Monitoring Report contains monitoring information resulting from an in depth examination of a representative sample of projects within the District.

The manner of reporting activities differs between various programs. Some resource programs are described in short narratives while others lend themselves to statistical summaries. Where possible, cumulative information covering the period since the beginning of the RMP (fiscal years 1995 through 2001) is provided.

Further details concerning these programs may be obtained by viewing the Salem District website at http://www.or.blm.gov/salem/ or contacting the District Office.

BUDGET

Budget Categories and Trends

In fiscal year 2001, Salem District had a total appropriation of approximately $20.9 million. This included $14.2 million for Oregon and California Railroad lands (O&C, including ‘timber pipeline funds); $900,000 for the Jobs in the Woods program; $1.9 million in Management of Lands and Resources (MLR) accounts; $190,000 for recreation pipeline and $282,000 for fire fighting.

During fiscal years 1995 through 2001, the Salem-BLM budget has had wide variations, ranging from $16 million in 1999 to $28 million in 1997. Overall, funding in O & C accounts has risen over the years, while funds in all other accounts have declined sharply. Other accounts are affected most by funding to respond to major projects, such as repairs to roads following floods.

At the end of fiscal year 2001 there were 184 permanent full time employees and 44 term or seasonal employees. In addition, several student trainees were employed during the year. The overall number of permanent full time employees has ranged from 179 to 185 since approval of the Salem District RMP. Personnel costs have increased, generally due to cost of living adjustments. As a result, there are less funds available for project work, overhead, and miscellaneous costs. A significant amount of internal cost savings are generally realized from the large number of personnel fighting wildfires across the nation.

Jobs in the Woods Funds

Thirty-four Jobs in the Woods (JIW) projects valued at $798,000 were awarded in fiscal year 2001. These were located across ten counties within three congressional districts. In fiscal year 2001, some of the District's Cascade Resource Area projects were included in the Willamette Province Workforce Project (WPWP) under which Salem BLM worked with the Willamette and Siuslaw National Forests to package contracts to provide long term contract work. Mary's Peak and Tillamook Resource Areas also worked with partners when possible to extend the watershed restoration and job creation benefits of Jobs- in- the- Woods project dollars.

Timber Sale Pipeline Funds - Forest Development and Sales

Since May 1998, funds have been available to work on "pipeline" timber sales. These are future or out-year sales; sales that would not be sold until the year 2000 or later. The purpose of these funds is to develop one year's worth of timber sales that are completely prepared and "on the shelf", in other words, "ready to be offered". Having these sales available, and in the "pipeline", will give more lead time to react to late developing issues that might delay sales in the current year.

During fiscal year 2001, the Cascades Resource Area continued preparation of environmental assessments and interdisciplinary team (IDT) work on sales to be offered in 2001 and later. All collected hydrological data was input into the GIS records to aid further planning efforts. Silvicultural screening of out-year sales using collected stand exam data was completed on four sales and is ongoing. All planned 2001 sales had red tree vole surveys which included climbing to verify occupancy of identified sites. Survey and manage mollusk surveys were completed on all but four planned out-year sales. Botanical surveys for S&M species were completed for sales scheduled through the year 2002.

The Tillamook Resource Area completed planning, survey and inventory work, environmental analysis, and lay out for 836 sale acres (about twelve million board feet of timber) during fiscal year 2001. These proposed sales occur in Adaptive Management Area (AMA) and General Forest Management Area (GFMA) lands.

Recreation Pipeline Funds

During fiscal year 2001, additional appropriations were provided by Congress to accomplish needed recreation maintenance, repairs, and improvements which had been postponed due to reduced funding over several years. These were referred to as "Recreation Pipeline" funds. Table 3 Shows how Salem utilized these funds.

Table 3 - RECREATION PIPELINE PROJECTS FY 2001

Project Area	**Project Description**	**Dollars Expended***
Fisherman's Bend Recreation Site	Completed the remodeling of a restroom to comply with the requirements of the American's With Disabilities Act.	$115,000
Mollalla River Recreation Corridor	Completed installation of a new restroom and improve resource protection and parking safety at dispersed campsites.	$40,000
Yellowbottom Recreation Site	Completed a solar powered water system and electrical upgrade (fee demonstration funds also contributed).	$30,000
Quartzville Wild & Scenic River	Completed replacement of information kiosk.	$5,000
Total	Salem District	$190,000

Table 4 - FEE DEMONSTRATION SITE EXPENDITURES FY 2001

Salem District Fee Demonstration Site FY 2001 Expenditures		
Site Name	Description	Dollars
Yaquina Head Outstanding Natural Area	Operation and maintenance of facilities and interpretative programs.	$92,000
Yellowbottom Recreation Site	Replaced and upgraded water system (pipeline funds also contributed to this project).	$21,750
Yellowbottom and Old Miner's Meadow Recreation Sites	Installed new fire rings and barbeques.	$3,250
Fishermen's Bend Recreation Site	Sign repair and replacement, shelter roof replacement, hazard tree removal, gravel for trails facilities, and for miscellaneous supplies and service.	$12,800
Wildwood Recreation Site	Completed work on entrance booth. Fence and roof repairs. Installed heaters in Salmon River Shelter. Replaced picnic tables, and for miscellaneous supplies and services.	$11,850
Alsea Falls Recreation Site	Constructed five miles of new hiking and mountain biking trails. Additional seasonal labor and miscellaneous supplies and services.	$19,550
General	Recreation Site volunteer and host programs	$16,100
General	Recreation Site Brochures	$10,700
Total Expenditures for Salem District Fee Demonstration Sites: $188,000		

Recreation Fee Demonstration Project

In 1996, the Recreation Fee Demonstration Program was authorized by Congress until September 30, 2002. The program was extended by Congress in 2001 to continue through September 30, 2004. The program expanded the Bureau of Land Management's (BLM) authority to charge and retain fees to provide additional funding for maintaining or enhancing the sites where the fees are collected. Yaquina Head Outstanding Natural Area has been a fee demonstration site since October 1, 1996 and collected $287,900 in fiscal year 2001. On October 1, 1997, the remaining developed recreation sites in the Salem District that charge fees were added to the program and $160,000 in fees were collected in fiscal year 2001. With the support of the Association of O & C Counties, these fees are being retained by the Salem

District to be used locally for visitor facility maintenance and repairs, accessibility improvements, visitor services, replacement of signs, environmental interpretation and new construction. Table 4 shows how the Salem District used fee demonstration funds.

Partnerships and Challenge Grants

In fiscal year 2001, the Salem District cooperated in twelve Challenge Cost Share projects that involved approximately 50 partners, encompassing federal, state and local government agencies, private corporations, conservation organizations, individuals and local watershed councils. Salem District grants totaling $164,000 were leveraged with nearly $837,500 in funding and value-in-kind contributions from partners. Projects included monitoring of sensitive plant populations and genetics; studies on non-vascular plants; and Cascade Streamwatch (a multi-partner cooperative for aquatic education). Partners in these projects included: Oregon State University, Oregon Department of Fish and Wildlife, the City of Salem, The Nature Conservancy, Americorps, Multnomah Youth Cooperative, Portland Metro, Oregon Watersheds, Avifuana Northwest, Forest Service, PGE/Enron, Pacific Northwest Mycology Service, Institute of Applied Ecology, Oregon Department of Agriculture, Willamette Industries, US Fish and Wildlife Service and others.

Wolftree Inc.: The Salem District continued a cost-share partnership with Wolftree Inc., in providing science-based Aquatic and Highland Ecology programs to more than 3,000 school children at Cascade Streamwatch, Larch Mountain Environmental Education Site and Fishermen's Bend Recreation Site. Wolftree participated in a new national interagency program called "Hands on the Land (HOL)" in which high school children completed resource related projects and reported their results on a HOL website that can be shared by other schools doing HOL projects. Wolftree received $50,000 of funding from the BLM which helped generate $500,000 of matching funding and in-kind donations from Wolftree's other sponsors and partners, some of which included Merrill Lynch & Co. Foundation, Portland General Electric, Spirit Mountain Community Fund, Willamette Industries, Rose Tucker Charitable Trust, Herbert A. Templeton Foundation, Barnard/Fain Foundation, Equal Exchange, Evolution Markets, Inc., Friends of the Children, James F. and Marion L. Miller Fund, Jeffery V. and Anne P. Hill Family Fund, Swindell's Family Fund, Land O'Lakes Foundation, Jackson Foundation, City of Portland, and U.S. Forest Service.

Songbird Celebration: The Salem District hosted a successful "Songbird Celebration" event at BLM's Wildwood Recreation Site in partnership with the U.S. Forest Service, U.S. Department of Fish and Wildlife, and Wolftree Inc. In celebration of International Migratory Bird Day, the event helped to connect people to birds and bird conservation issues. The event attracted 1,500 people and featured 28 exhibitors, educational displays and presentations, guided bird walks, bird banding demonstrations, live bird presentations, children's activities, field ecology exercises, music and other live performances. In addition to hosting the event, the BLM provided educational bird displays and a display on where to birdwatch on BLM-administered lands in Oregon. BLM staff also gave bird banding demonstrations and guided walks. The $3,500 in challenge cost share funding provided by the BLM was matched by $27,000 in contributions and in-kind donations for the event. Other sponsors and partners included Mt. Hood RV Village, Backyard Bird Shop, Portland Audubon Society, Oregon Chapter of the Wildlife Society, NW Natural, Portland Roasting Company, Equal Exchange, REI, Fred's RV World, David Evans Associates, and KGW News Channel 8.

Salmon Festival: The Salem District sponsored and participated in the Portland Metro's 18th

Annual “Salmon Festival” at Portland Metro’s Oxbow Region Park along the Sandy National Wild and Scenic River. The Salmon Festival provided over 7,700 visitors with the opportunity to see wild salmon spawning in the Sandy River and to learn more about the importance of watersheds and fisheries from 50 exhibitors, activities, and musical entertainment for adults and families. The BLM staffed a booth at the event and developed a new display, “Experience the Magic of Rivers and the Miracle of Salmon” with information on the District’s Wild and Scenic Rivers and river restoration projects. New displays on the Life Cycle of Salmon for Cascade Streamwatch were also developed. BLM staff also assisted in guiding salmon-viewing walks. The $5,000 in challenge cost share funding provided by the BLM was matched by $75,000 in contributions and in-kind donations for the event. Other sponsors and partners included Portland Metro, Mt. Hood National Forest, Oregon Trout, Portland Water Bureau, Portland General Electric, KKJZ FM 106.7, Columbia Sportswear, and Portland Family Magazine.

Fish population monitoring: The Salem District joined with the Oregon Department of Fish and Wildlife, Forest Service, USFS-Pacific Northwest Forest and Range Experiment Station and PGE/Enron to monitor production of ESA listed fish stocks in the Alsea and Clackamas River basins. These basins provide habitat for several federally listed species of anadromous fish. The smolt trapping studies have provided valuable information on fish production in these basins through years of varied climatic and oceanic productivity conditions. Fiscal year 2001 expenditures for all partners was approximately $146,000.

Botanical Studies: Salem BLM was involved in six botanical studies in fiscal year 2001. Fiscal year 2001 expenditures for all partners totaled nearly $262,000.
This was the third year for the Green Peak Density Management Study and the Polk County Chronosequence Study. Through the studies more than 20 new known sites of survey and manage species were discovered. Many of these species are occurring in 65 year-old or younger Douglas-fir stands. The information gathered could assist in the removal of the species from the list of taxa of concern in the final EIS for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Both studies will continue in fiscal year 2002.

A study investigating habitat enhancement and propagation techniques for tall bugbane (*Cimicifuga elata*) was continued for a second year. Another partnership has been working to control and eradicate invasive exotic plant species from the Sandy River Wild and Scenic River corridor. In an effort to develop a supply of locally adapted native plant materials for revegetation efforts in a variety of different habitat types, the Salem District partnered in the beginning of a common garden and seed zone study Roemer’s fescue (*Festuca roemeri*).

Salem BLM is cooperating with Oregon State University and the U.S. Forest Service on a study of the demographics of *Bridgeoporus nobilissimus* known site populations. The objective is to gain a better understanding of the population dynamics of *B. nobilissimus*. This will allow land managers to make conclusions about whether or not populations are stable, increasing or decreasing. *B. nobilissimus* is a Bureau Sensitive Species as well as a Survey and Manage strategy 1,2 and 3 species.

Willamette Restoration Initiative (WRI) The BLM is supporting conservation efforts in the Willamette River Basin through extensive communication, cooperation, and consultation with local communities, the State of Oregon, and other federal agencies. WRI, a public/private partnership formed by the Governor’s executive order in October 1998, developed a restoration strategy to help restore the health of the Willamette River Basin. The Salem and Eugene BLM Districts are helping to implement the strategy by working cooperatively with the

state and other federal agencies to provide technical support to local watershed groups, coordinate management of invasive weeds, and identify priorities for improving fish passage at dams, culverts and water diversions. Through the American Heritage River initiative, last year the BLM worked with WRI to help obtain grants to support local watershed groups and communities.

American Heritage River Initiative: The American Heritage River initiative has been active in the Willamette Basin for approximately two years. Recent AHR accomplishments, in support of local community needs, generally fall into three categories; funding, partnership-building and education. Immediate financial returns to communities were four times the cost of the AHR program for fiscal year 2001. Multi-year financial returns are projected to be thirteen times the cost of the program for the past year.

AHR provided funding for local needs by:
• Obtaining (up to) $978,000 to support watershed groups over a three year period.
• Obtaining more than $60,000 for Perwinkle Creek restoration in Albany.
• Obtaining $250,000 to provide technical support and assistance to local watershed groups.
• Writing more than $2 million in grant applications.
• Identifying additional funding opportunities and making connections to fund future projects.

AHR built partnerships by:
• Requesting the National Park Service to work with five cities, several counties and other interested groups to plan a potential regional river corridor system.
• Working with the Willamette Provincial Interagency Executive Committee and WRI to implement a technical assistance program for local watershed groups.

AHR supported informational and educational activities by:
• Leading a group to develop and implement a system of watershed restoration interpretive signs.
• Contributing to the first 'Paddle Oregon' float down the Willamette River.

Additional information on AHR can be seen at: http://www.oregonwri.org/AHR-2001-report.pdf

Volunteer Program

The volunteer program continued to be very successful. Over 600 volunteers contributed 42,000+ hours to the Salem District BLM. Their contributions are valued at $275,000 (based on minimum wage estimates). Overall BLM costs to support the volunteer program were $90,000. This calculates to a net value of $185,000 to BLM (equivalent to 1 percent of the Salem District's total budget).

Volunteers contributed work in a wide variety of programs, none of which could have been accomplished with BLM funds alone. Without help from volunteers, the work would not have been done. In some cases, the volunteers wanted to gain experience for future jobs. In other cases, the volunteers wanted to merely contribute toward a worthwhile project. Recreation programs garnered 76 percent of the volunteer hours. Biological programs, environmental education, support services, and surveying were the beneficiaries of the remaining 24 percent.

LAND USE ALLOCATIONS (LUAS)

No adjustments to LUA boundaries or acreage within LUAs were made during fiscal year 2001. Acreage adjustments were reported in Annual Program Summaries in fiscal year 1998 and 1999. Table 4 shows LUA acreage revisions since RMP implementation began.

Table 5 - SALEM-BLM, REVISED ACREAGE WITHIN LAND USE ALLOCATIONS*

Major Land Use Allocation	Acres in RMP Record of Decision	Acres After Update BEFORE Removing "Unmapped" LSRs (Owl,MM)	Acres After Update AFTER Removing "Unmapped" LSRs (Owl,MM)
Late-Successional Reserves Outside of the Adaptive Management Area	132,100	133,635	135,444
Late-Successional Reserves Inside of the Adaptive Management Area	79,700	80,438	80,821
Adaptive Management Area	43,700	41,907	41,524
General Forest Management Area (Matrix)	107,300	105,663	104,806
Connectivity / Diversity Blocks (Matrix)	27,400	27,132	26,192
Other	7,900	12,464	12,452
TOTAL ACRES	398,100	401,241	401,241

* See Salem RMP Record of Decision page 5 for original footnotes.

The figures do not include recently acquired lands in the Sandy River basin.

LSRs=Late-Successional Reserves MM=Marbled Murrelet

Riparian reserves are included in all land use allocations listed above. The amount of acres within riparian reserves is estimated at approximately 55 percent of the land base or 222,000 acres (based on mapping and analysis factors).

AQUATIC CONSERVATION STRATEGY (ACS) IMPLEMENTATION

Riparian Reserves

Twelve projects were implemented in riparian reserves in fiscal year 2001. Monitoring recorded a continuing trend of good compliance with stream marking and identification throughout all units monitored. A complete record of the results of monitoring activities within riparian reserves is included in the Monitoring Report.

Key Watersheds

Tier 1 key watersheds were identified in the Northwest Forest Plan (NFP) to serve as refugia for at-risk stocks of anadromous salmonids and resident fish species. Tier 2 key watersheds were identified as important sources of high quality water. The NFP calls for application of specific management actions involving watershed analysis, roads, restoration, and timber harvest in key watersheds.

Seven management actions occurred in key watersheds and all had watershed analysis completed before the project implementation. None of these projects included commercial timber harvest activities. The majority of the activities were related to silvicultural practices such as tree planting , manual maintenance and brush cutting. One project involved replacement of culverts in the Upper Nestucca Key watershed.

Watershed Analyses

Watershed analysis is required by the Northwest Forest Plan (NFP) Record of Decision (ROD) before specific actions are taken. The primary purpose is to provide decision makers with information about the natural resources and human uses in an area. This information is used in National Environmental Policy Act (NEPA) documentation for specific projects and to facilitate compliance with the Endangered Species Act (ESA) and the Clean Water Act (CWA) by providing additional information for consultation with other agencies.

Watershed analyses include:

* Analysis of at-risk fish species and stocks, their presence, habitat conditions, and restoration needs;
* Descriptions of the landscape over time, including the impacts of humans, their role in shaping the landscape, and the effects of fire;
* The distribution and abundance of species and populations throughout the watershed;
* Characterization of the geologic and hydrologic conditions.

This information was obtained from a variety of sources, including field inventory and observation, history books, agency records and old maps and survey records.

Three watershed analyses were completed during fiscal year 2001. The remaining watersheds have small, isolated BLM parcels, with little BLM acreage. Most are low priority and may be accomplished by the watershed councils and Soil & Water Conservation Districts. The status of watershed analyses is shown in Table 5 and the accompanying list.

Table 6 - WATERSHED ANALYSIS STATUS

	Watershed Analysis Areas	Number of Key Watersheds	BLM Acres	Percent of Total Acres
Completed through FY01	51	17	346,410	87%
Ongoing FY02	3	0	40,884	10%
Remaining FY03+	15	0	13,947	3%
Total	69	17	401,241	100%

Watershed Analyses Completed Through Fiscal Year 2001:

FISCAL YEAR	COAST PROVINCE	WILLAMETTE PROVINCE
1994		Abiqua Butte
		Upper Fish Creek
1995	Nestucca River	Eagle Creek
	Big Elk / Yaquina	Hamilton Creek
		Upper Clear Creek
		Collawash
		Shot Pouch (S.Santiam)
		Salmon River
1996	North Fork Alsea	Upper Sandy
	South Fork Alsea	Lower Clackamas
	Drift Creek (Siletz)	North Fork Clackamas
	Upper Siletz	
1997	Five Rivers / Lobster	Benton Foothills
	Drift Creek (Alsea)	Bull Run / Little Sandy
	East Fork Nehalem River	Scappoose Creek
	Netarts /Sand Lk.Fr. Kilchis	North Yamhill
	Middle Fork, North Fork Trask	Thomas Creek
		South Fork Clackamas
1998	Yachats	Little North Fork Santiam
	Little Nestucca	Two combined analyses

Combined 1 - Rowell Creek, Mill Creek, Rickreall Creek, Luckiamute River
Combined 2 - Deer Creek, Panther Creek, Willamina Creek, and South Yamhill River(part)

1999	Salmon / Neskowin	Molalla
	Lower Alsea River	Dairy / McKay
	Rock Siletz	Marys River
	Kilchis	Calapooia
	Trask / Elkhorn	
2000	Wilson/North Fork Wilson	Scoggins/Upper Tualatin
	Lower Nehalem River	Scappoose Bay*

Cook Creek / Lower Nehalem River
*Includes Milton Creek and Multnomah Channel)

2001

Clatskanie River
Mid Tualatin
Crabtree

Watershed Analysis Ongoing or Proposed in Fiscal Year 2002:

COAST PROVINCE
Wilson

WILLAMETTE PROVINCE
Quartzville Creek
North Santiam River
Lower Clear Creek

Watershed Restoration Projects

Watershed restoration is a long-term program to restore watershed health and aquatic ecosystems, including the habitats supporting fish, other aquatic and riparian organisms, and water quality. The most important components are control of management related runoff and sediment, restoration of desired riparian vegetation and enhancing instream habitat complexity. Instream restoration is covered later in the report.

As funding becomes available and/or restoration projects are identified, roads in the transportation system are being taken out of service by either closing or obliteration (See Table 1). The transportation management plan and transportation management objectives (TMOs) play key roles in this identification. Taking a road out of service may be as simple as installing a gate at the front end of the road, but could be as complex as completely removing the road by obliteration. Other projects included road restoration to control and prevent resource damage. Culverts are being replaced where they do not meet the requirements of the Aquatic Conservation Strategy (ACS). The Laurel Creek and Bear Ridge / Elk Creek projects completed in fiscal year 2001 were designed and implemented to meet ACS objectives.

The District's conifer restoration work continued in the Upper Lobster Creek watershed and in BLM lands along Willamina Creek drainage. A similar project was started this year in the Upper Mollalla watershed. These projects focused on control of brush and hardwood species that compete with the young conifer which exist naturally or have been planted. The long term benefits are to provide shade and future large wood recruitment to realize ACS objectives. These activities followed recommendations found in the respective watershed analysis for each area.

LATE-SUCCESSIONAL RESERVES (LSRS) AND ASSESSMENTS

Late-Successional Reserve Assessments have been completed and reviewed by the Regional

Ecosystem Office for all late-successional reserves within the Salem District. Many of the LSR assessments were joint efforts involving the US Forest Service and other BLM districts. During the fiscal year, 71 thousand board feet of wood was removed primarily through density management or salvage. During the period of 1996 through 2001, there were 443 acres of density management in late-successional reserves. Other activities that occurred in LSRs include planting and precommercial thinning. All of these activities were accomplished under either initial LSR assessments completed prior to fiscal year 1997 or subsequent LSR assessments which met applicable standards and guidelines.

Twelve projects were completed in LSRs in fiscal year 2001. Monitoring recorded good compliance with LSR requirements. A complete record of the results of monitoring activities within LSRs is included the Monitoring Report.

NORTHERN COAST RANGE ADAPTIVE MANAGEMENT AREA (AMA)

Local Watershed Councils

AMA staff participate monthly with the Nestucca/Neskowin Watershed Council and the Yamhill Basin Council, collaborate in development of jointly funded restoration project proposals, and provide technical assistance with design of a variety of watershed restoration projects. Watershed councils provide a source of creative ideas and local participation in management of the AMA.

Collaboration with Tribes

Tillamook Resource Area (BLM), the Hebo Ranger District (USFS) and the Natural Resource Department of the Confederated Tribes of Grand Ronde are continuing to collaborate in management of federal and tribal lands within the upper South Yamhill River watershed. The Tribe entered into a participating agreement with Siuslaw National Forest in June 1999. It has been carrying out a variety of resource inventories and developing priorities for habitat restoration projects for 6600 acres of national forest lands in the basin.

BLM signed a negotiated contract with the Tribe in September, 2001. Through the contract, the Tribe is responsible for completing various forest resource inventories on 4200 acres of BLM lands in the Upper South Yamhill basin. In the next phase of the project, the Tribe will analyze inventory results and begin identification of treatment needs and opportunities on the BLM lands.

This collaboration with the Grand Ronde Tribe is expected to provide a variety of benefits. These include greater coordination of forest management at the watershed level, increased involvement of local communities, more effective use of resource management staff, ability to accomplish more beneficial projects, and increased opportunity for innovation and learning in the application of forest management practices.

Landscape Management System (LMS)

AMA staff have explored various ways of testing and comparing management strategies on a large landscape level for several years, but none have moved forward to implementation.

During fiscal year 2001, BLM received a proposal from Professor Chadwick D. Oliver of the University of Washington (UW) to apply a case study of The Landscape Management System (LMS), which he and his staff devised, to two or three landscape areas of BLM lands in western Oregon.
LMS consists of a core computer program and several companion programs that assist land managers in rapid analysis, planning, and implementation of a variety of silvicultural pathways designed to achieve multiple, diverse landscape-level objectives.

BLM subsequently entered into a contract with UW under which Dr. Chadwick Oliver's staff will assist BLM personnel in applying LMS on three trial landscapes, two of which are located within the Northern Coast Range AMA. One of these is the Mill Creek watershed, in the Marys Peak Resource Area, and the other is the Upper South Yamhill basin, within the Tillamook Resource Area. The information being collected for BLM and national forest lands in the South Yamhill basin will provide an excellent base inventory for application of LMS in this area. Implementation of LMS on these areas is planned for the spring and summer of 2002.

Nestucca Valley Education Partnership

AMA staff from BLM's Tillamook Resource Area are collaborating in an ongoing natural resource education venture with schools in the southern part of Tillamook County. Partners include the Siuslaw National Forest's Hebo Ranger District, the Nestucca Valley School District, the Confederated Tribes of Grand Ronde, Simpson Timber Company, the Nestucca-Neskowin Watershed Council, the Nestucca Valley Anglers, and other local landowners. The partnership provides a structure under which students from the elementary, middle, and high schools are working with staff from the federal agencies and other partners to accomplish useful ecosystem management projects. The projects provide students with hands-on learning about natural resource issues while performing various types of surveys, restoration projects, and monitoring on lands managed by the partners.

An offshoot of the partnership is the **Nestucca Connections** program, in which Nestucca Valley High School students are involved in resource management tasks on public lands. The students work in the field for a week at a time, and on alternate weeks they are in the classroom reviewing their field work and connecting it with educational objectives in fields such as science, math, language arts, and history.

AIR QUALITY

Air quality continues to be a major emphasis item for Salem BLM. During fiscal year 2001, special care was taken to ensure that all prescribed fire projects were done in compliance with the Oregon Smoke Management Plan. There were no intrusions of smoke into any designated area or into any Class 1 air sheds. Experienced prescribed fire managers write the burn plans, and then implement those plans when good smoke mixing and dispersal exist. Significant reductions in acres being burned and prompt mop-up of burned units has also helped to reduce residual smoke.

WATER AND SOILS

Water and soils are important and high profile issues in terms of federal regulation and BLM's commitment to the Aquatic Conservation Strategy Objectives found in the Northwest Forest Plan. Water quality, both for domestic drinking and for fish habitat, is one of Salem BLM's highest priority programs. Protection of soils to reduce sedimentation into waterways, reduce chances of landslides, and otherwise enhance the productivity of land is closely associated with water quality.

The Salem District continues to implement non-point source management through:

Environmental Analysis: Specialists on interdisciplinary teams identify all potential impacts to downstream beneficial uses. This identification allows the team to develop appropriate design features to protect these uses. Information can include on-site investigations for fish and stream habitat, review of all available water use data including the Water Resource Department's water right database, and Oregon Department of Fish and Wildlife and Oregon Department of Forestry stream surveys. This process also recognizes downstream waters on the Oregon Department of Environmental Quality's 303d list and assesses potential contributions to water quality limited reaches. Impact assessment is conducted using Oregon's water quality criteria.

Best Management Practices (BMP's): BMP's are designed to avoid or mitigate impacts to water quality and beneficial uses. They are designed for the specific site and are based on the linkage between the action and beneficial uses.

Implementation, Effectiveness and Temperature Monitoring: Projects are monitored to assess the identification of beneficial uses, BMP design and implementation and the effectiveness of a BMP. In fiscal year 2001, water temperature monitoring was emphasized in the North Santiam and Clackamas sub-basins. During FY2001 Salem BLM funded four USGS continuous recording stream gauge stations which occur in 303d listed sub-basins. This data and hydrologist expertise has been shared with watershed councils in an effort to cooperate with the Governor's Plan and develop watershed-based plans. A complete discussion of the monitoring results is in the Monitoring Report.

Waterbody and Watershed Identification: The Salem District has protected flood plains and wetlands through on-the-ground implementation of the NFP riparian reserves for wetlands and flood plains. As in the past, field riparian reserve mapping was incorporated into the update of water bodies within the Geographic Information System (GIS) hydrology theme to help with future on-the-ground management. Salem District hydrologists cooperated with the Regional Ecosystem Office to integrate previously delineated 6th field sub- watersheds into a state-wide coverage. This involved extensive coordination with the US Forest Service, Natural Resource Conservation Service and surrounding BLM districts. This data will be integral to sub-watershed selection for NFP aquatic effectiveness monitoring, cumulative watershed assessments and project level planning.

303d Listed Streams

The Salem District manages lands in 12 sub-basins that currently contain 303d listed streams identified by the Oregon Department of Environmental Quality (DEQ). The development of

Total Maximum Daily Loads (TMDL's) and Water Quality Managment Plans are required on these sub-basins. Oregon DEQ has set target priority dates for development of TMDL's and Water Quality Management Plans in the listed sub-basins. Table 5a provides the sub-basin, stream segment name, and current plan development status for the sub-basins containing more than 640 acres of Salem District administered lands. The Draft Nestucca TMDL and Water Quality Management Plan was issued for review by Oregon Department of Environmental Quality in December 2001.

Table 7 - PLANNING FOR TOTAL MAXIMUM DAILY LOADS (TMDLs)

Sub-basin	Stream Segment (parameter)	DEQ Priority Date for TMDL
Tualatin	East Fork Dairy Creek (temperature) McKay Creek (temperature)	Completed
Nestucca, Tillamook Sub-basin	Trask River (temperature) Wilson River (temperature) Nestucca River (temperature, sediment) East Beaver Fork Creek (sediment)	Tillamook portion of sub-basin is completed. Nestucca portion of sub-basin is drafted.
North Santiam	Little North Santiam (temperature) Elkhorn Creek (temperature) North Santiam River (temperature)	2003
South Santiam	Thomas Creek (temperature) Hamilton Creek (temperature) Crabtree Creek (temperature) Quartzville Creek (temperature)	2003
Clackamas	Clackamas River (temperature)	2003
Middle Willamette	Rickreall Creek (temperature)	2003
Upper Willamette	Mary's River (temperature)	2003
Alsea	Alsea River (temperature) Fall Creek (temperature) Lobster Creek (temperature) Little Lobster Creek (temperature)	2006
Siletz	Siletz River (temperature) Drift Creek (temperature)	2006
Yamhill	Mill Creek (temperature) North Yamhill River (temperature) Turner Creek (temperature)	2007
Molalla	Molalla River (temperature) North Fork Molalla (temperature) Table Rock Fork (temperature) South Fork Molalla (temperature) Pine Creek (temperature)	2007
Sandy	Salmon River (temperature) Sandy River (temperature)	2007

Municipal Watersheds

The Salem District has an ongoing management agreement with private land owners in the Rickreall watershed which provides water for the City of Dallas. The current agreement consists of seasonal vehicle closures on the road system.

Four Memorandums of Agreement (MOAs) concerning management of the Sandy (Alder Creek), Clackamas, Molalla and Little North Santiam watersheds are in effect. These watersheds contain the municipal water supplies for Sandy, Clackamas, Estacada, Lake Oswego, Oregon City, Molalla, Canby and Salem. These agreements focus work on cooperative water quality monitoring and coordination concerning management actions taking place.

Updated Stream Information

During 2001, the Salem District continued the extensive update of the stream and lake (Hydrography) Geographic Information System theme. Final spatial updates were completed on 21 remaining fifth field watersheds, containing substantial BLM acreage, for a total of 995,367 square acres densified in 2001 (compared to 2,305,440 in 1999). With the majority of spatial update work completed it was possible to concentrate efforts on the attribute review component of the update process. In 2001, 16 - fifth field watersheds (1,188,869 square acres) were reviewed for attribute accuracy and full Aquatic Resource Information System (ARIMS) readiness. Additionally, in the Coast Range, Salem District coordinated its efforts with the Mount Hood and Willamette National Forests to ensure greater data reliability.

Site Treatments

Management actions around fragile sites (eg. wetlands, unstable and potentially unstable slopes) are protected by identifying them on-the-ground and where applicable, designing riparian reserves around them. Project planning around these sites requires an accurate map which has often not been available until site specific environmental analysis has occurred. As with stream identification, this has expanded workload and time for planning and implementing projects.

Best Management Practices

Best Management Practices (BMPs) are project features which are designed to avoid or minimize degradation of water quality, flow regimes, and soil productivity. Implementation of BMPs is “management in action” to meet the objectives outlined in the Aquatic Conservation Strategy. Monitoring feedback on BMP performance is integral to adjusting management actions to improve our ability to maintain and restore the ecological health of watersheds. Monitoring of BMP implementation and effectiveness followed by adjustment of BMPs where appropriate is necessary for compliance with the Clean Water Act. A complete discussion of the BMP monitoring results is in the Monitoring Report.

WILDLIFE HABITAT

The type of work affecting wildlife and wildlife habitat depends on the land use allocation. Projects follow the recommendations identified in watershed analyses and late-successional reserve assessments. Forest management actions within matrix allocations (GFMA, AMA, Connectivity) are designed to meet timber management objectives in conformance with NFP/ RMP Standards and Guidelines. Only six acres of regeneration harvest was offered on matrix lands during fiscal year 2001. Mitigating measures to reduce impacts to wildlife in regeneration harvests includes green tree retention, snag retention and recruitment and management to increase coarse woody debris (CWD). During fiscal year 2001, the Salem District treated 506 acres to create CWD. A discussion of monitoring results pertinent to green tree retention, snags and coarse woody debris is included in the 'Monitoring Report.'

In fiscal year 2001, all forest management activities in late-successional reserves were designed to enhance late-successional forest characteristics for wildlife habitat. This habitat enhancement was for all kinds of species, from raptors to invertebrates, and also benefited fungi, bryophytes, and vascular plants.

Connectivity/Diversity Blocks

One timber sale unit was harvested in connectivity blocks during fiscal year 2001. Two timber sales in connectivity land use allocation areas were sold. Approximately 90 wildlife trees were created in one timber sale area within the connectivity land use allocation.

Northern Spotted-owl

Special Habitats

No projects addressing special habitats were implemented.

Nest Sites, Activity Centers, and Rookeries

No new spotted owl activity centers, no new rookeries, and no new raptor nest trees were discovered in this fiscal year. Known nesting trees have been protected. For active nests, particularly for raptors and special status species (like the spotted owl), seasonal restrictions have been placed on nearby projects to discourage nest abandonment. Seventeen spotted owl activity centers (1,857 acres of 100+ acre core areas) identified in accordance with the RMP, have been protected for many years. No nest boxes or platforms have been installed since implementation of the RMP. Some tree topping has occurred to provide nesting or perching structures for forest raptors.

Elk Habitat

To restore watershed conditions, often unstable or no longer required roads are decommissioned or obliterated. Twenty-six miles of road were decommissioned or obliterated. An additional 20 miles of road were closed and storm proofed. While elk are not the primary reason for decommissioning or obliterating roads, they are a beneficiary.

Late Successional Reserve (LSR) Habitat Improvement

The Salem District implemented 54 acres of density management treatments in 50 to 70 year old stands to stimulate the development of old growth characteristics. The district also completed about 1,636 acres of pre-commercial thinning in very young stands in LSRs to accelerate the development of older forest structures.

FISH HABITAT

During this fiscal year, the Salem District completed 123 acres of riparian restoration to promote conifer establishment along streams, placed large wood and boulders along 3.5 miles of streams, replaced or modified five culverts to improve fish passage, and decommissioned or improved 26 miles of roads to reduce road impacts to streams. These actions benefitted coho and chinook salmon, steelhead, cutthroat trout, Pacific lamprey, and other species.

Approximately 200 large logs and trees, and 74 large boulders, were placed in the mainstem Nestucca River to improve rearing habitat for anadromous fish. The majority of the logs were placed in logjam-type structures at eight sites along three miles of the upper Nestucca River. The jams were constructed in reaches which had been successfully enhanced in the past to improve spawning habitat but lacked habitat complexity important for good rearing and cover habitat. Logs/trees used for the project ranged from 40 to150+ ft. in length. Numerous trees near the river were pulled over into the channel. This technique provides large, natural structures to the channel with improved stability because the rootwads are still rooted into the ground. BLM cooperated with a private landowner to place approximately 60 logs in Feagles Creek, a tributary to the Yaquina River. BLM provided the logs which were placed in the channel as it meanders through a pasture on private land. This project was done under the Wyden Amendment authority in conjunction with ODFW and the local watershed council. The Salem District, in cooperation with Portland General Electric, Mount Hood National Forest, and the Pacific Northwest Research Station completed another year of smolt trapping for Lower Columbia River steelhead and coho in the Clackamas River basin. Trapping results continue to indicate that the lower tributaries with BLM lands appear to have the highest fish production in the Clackamas basin.

For the 14th consecutive year, smolt trapping to monitor coastal coho in Lobster Creek was also completed in cooperation with the Oregon Department of Fish and Wildlife(ODFW). The Lobster Creek smolt monitoring project is longest continuous fish production study in Oregon. Initially started to monitor BLM instream habitat projects and to test ODFW's coho production model, this study has provided important information on fish production and survival through several of the wettest and driest years on record and through major changes in ocean productivity.

A significant amount of fisheries program time was spent on project level environmental analysis, watershed analysis, inventory, monitoring and T&E program requirements. Salem District personnel continued to conduct limited spawning and adult rearing surveys in coastal and Columbia basin streams within the District. Local cooperative efforts have continued to be focused on support and technical assistance to various watershed councils.

SPECIAL STATUS SPECIES,
SEIS SPECIAL ATTENTION SPECIES AND HABITAT

Survey and Manage Species (S&M)

The Secretaries of Interior and Agriculture signed the Record of Decision (ROD) on Jan. 12, 2001 that finalized changes to the "Survey and Manage" mitigation measures in the Northwest Forest Plan. These mitigation measures, in conjunction with other elements of the NWP, provide direction for managing the approximately 400 rare species that are thought to be closely associated with late-successional forests. A more detailed explanation of the ROD is included in the 'Plan Maintenance' section of this report.

The Salem District has implemented management actions directed by the standards and guidelines under the Salem District RMP for Survey and Manage/Protection Buffer Plant Species through fiscal year 2001. Salem District employees developed mitigating measures for Survey and Manage species (when applicable) in project Environmental Assessments.

Survey and manage animal species include mollusks, amphibians, and mammals. Survey accomplishments for survey and manage animals follows:

OREGON RED TREE VOLE: Approximately 3,020 acres were surveyed to protocol standards for this species. About 210 potential nest structures were identified, but only 40 were confirmed as active red tree vole nests.

LARCH MOUNTAIN SALAMANDER: This species may occur within the Cascade Resource Area. Surveys were conducted on one potential timber sale area covering 200 acres in potential salamander habitat during. No Larch Mountain salamanders were encountered.

GREAT GREY OWL: This species is primarily found above 3,500 feet in elevation, however sightings have occurred within the Willamette Valley portion of Salem District. No projects impacting great gray owl habitat were implemented.

MOLLUSKS: Approximately 4,930 acres were surveyed to protocol for the eight mollusk species identified as potential inhabitants of Salem District.

Wildlife

Surveys for Special Status (SS) and Special Attention (SA) wildlife species (see glossary) were completed prior to all ground disturbing activities. Roughly 10,350 acres of pre-project surveys were conducted during fiscal year 2001, bringing the total from 1996 through 2001 to 41,950 acres.

Threatened \ Endangered (T/E) Species: In fiscal year 2001, interagency teams continued using the Section 7 streamlined consultation process. Level one teams, consisting of local employees from BLM, FS, and FWS, regularly met to accomplish consultations. Three wildlife programmatic consultation packages were completed for T/E wildlife. One consultation package for disturbance was completed for the Willamette Province. A consultation package for disturbance and one for habitat modification were completed for the North Coast Province. This helped avoid numerous redundant consultation efforts for normal, repetitive actions. In

addition, five other consultations for terrestrial T/E wildlife were conducted for activities outside the scope of the programmatic activities. The biological opinions received from FWS were then used in project planning for fiscal year 2001 and beyond.

Bald Eagle: During fiscal year 2001, five known bald eagle nesting sites were surveyed for activity and reproductive success; two nestlings, greater than four weeks of age, were observed. In coordination with other federal and state agencies, winter bald eagle counts were completed on four designated routes. One other designated route could only be partially completed due to weather conditions. The largest known winter roost site on Salem District had a high count of 38 eagles along one of these survey routes.

Marbled Murrelet: The Salem District has 29 known occupied murrelet sites in LSR land use allocations of the Coast Range. Six new sites, mapped since the RMP/ROD was finalized, account for an additional 1,809 acres of "unmapped LSRs".

Two years of surveys are required for marbled murrelets on all projects that will modify suitable murrelet habitat in the Coast Range. From 1995 through fiscal year 2001, surveys have been completed where required for specific projects, in accordance with established protocol. In fiscal year 2001, the Salem Dsitrict conducted 110 surveys for marbled murrelets over fourteen project areas covering about 2,200 acres. Murrelet monitoring was conducted in the Valley of the Giants (the habitat area on Salem District administered lands with the known highest level murrelet use) along with two other areas. Results indicate about the same murrelet activity as the previous year's levels, still well below historic high use levels in the 1980's.

Northern Spotted Owl: In cooperation with timber companies, consultants, state, and federal agencies, 85 spotted owl sites were monitored on BLM and adjacent landowners within the Salem District. Thirty-eight of these sites were monitored by the Pacific Northwest Research Station (PNW), as part of a larger Coast Range demographic study area.

Sixty-four of the 85 sites were on BLM lands, of which 27 sites (42%) were occupied by pairs of spotted owls. Across all ownerships, a total of 20 spotted owl sites were determined to be nesting, of which 17 sites produced 28 fledgling owls (24 were banded). One adult owl was banded this year and 59 previously banded owls were confirmed by identification of their color bands. The one newly banded adult, along with four juveniles were banded under BLM permit 22070; all other banded owls were by cooperators, mostly PNW.

Incidental observations of barred owls in or adjacent to spotted owl sites were also tallied during surveys. A total of twenty-three sites had detections of single or paired barred owls (11 in Cascades, 12 in Coast Range). No confirmed hybrid owls were detected this year.

FISH

Survey and Manage Species (S&M)

There are no survey and manage fish species on Salem BLM administered lands.

Threatened \ Endangered Species

In fiscal year 2001, interagency teams continued using the Section 7 streamlined consultation

process. Level 1 teams, consisting of members from BLM, USFS, National Marine Fisheries Service and USFWS, regularly met to assure consultation was accomplished efficiently. There are eight Federally listed fish species or Evolutionarily Significant Units (ESU) within the Salem District boundaries: Upper Willamette River spring chinook ESU, Upper Willamette River winter steelhead ESU, Lower Columbia River steelhead trout ESU, Columbia River chum salmon ESU, Lower Columbia River chinook salmon ESU, Oregon Coast coho salmon ESU, Columbia River bull trout and Oregon chub. One additional ESU is proposed for listing: Southwestern Washington/Columbia River cutthroat trout. Candidate species for Federal listing include the Oregon Coast steelhead trout, Oregon Coast cutthroat trout and the Lower Columbia/Southwestern Washington coho salmon. Oregon Coastal coho salmon were delisted as a result of a court decision in September 2001, however in December, 2001, the 9th Circuit Court restored coho salmon to Threatened status as the Court accepted an appeal to the lower court's ruling. Other on-going litigation against the NMFS continues the hinder our ability to complete consultation on many Northwest Forest Plan projects which may affect listed anadromous fish species. Incidental take for a variety of programmatic actions which may affect listed salmonids was extended through September 2002. Many normal, repetitive actions are allowed to be implemented without further consultations provided they are implemented according to design criteria within the programmatic consultations.

Coastal coho salmon: Consultation was completed on three BLM timber sales in fiscal year 2001. BLM, in cooperation with Oregon Department of Fish and Wildlife, has continued to monitor coho smolt production in Lobster Creek, a tributary to the Alsea River. The Salem District implemented riparian restoration and large wood placement projects in the Alsea, Yaquina and Nestucca River basins which were targeted to improve habitat for coastal coho salmon. Large wood was placed in 3.5 miles of the mainstem Nestucca River and Feagles Creek, a Yaquina River tributary, to provide spawning and rearing habitat for listed coho salmon and other sensitive species of anadromous fish.

Lower Columbia River and Upper Willamette steelhead trout, chinook salmon and Lower Columbia River cutthroat trout: Consultation was completed for two timber sales and the Horning Seed Orchard spray project in fiscal year 2001. BLM, in cooperation with the Pacific Northwest Research Station, Mt. Hood National Forest, and Portland General Electric, continued to monitor smolt production of federally listed anadromous fishes in streams in the Clackamas River basin. BLM's participation in this project has provided valuable insight into fish utilization of the lower tributaries of the Clackamas River.

PLANTS

Surveys, monitoring, consultation and restoration activities were conducted for Special Status (SS) plant species. Species management was consistent with RMP direction for SS plant species. Surveys for Special Status (SS) and Special Attention (SA) plant species (see glossary) were completed prior to all ground disturbing activities. Roughly 4,400 acres of pre-project surveys for Special Status plant species were conducted, bringing the total from 1996 through 2001 to 36,200 acres.

TALL BUGBANE (*Cimicifuga elata*): Implementation of "The Conservation Strategy for *Cimicifuga elata* (Tall bugbane)", developed by Western Oregon BLM Districts, National Forests and the Army Corps of Engineers was continued in 2001. A three year *Cimicifuga elata* study to establish propagation and out-planting techniques along with establishment monitoring of transplants were completed. Three populations of *Cimicifuga elata* (a Bureau Sensitive Species) were monitored in fiscal year 2001 and were found to be stable.

COAST RANGE FAWN-LILY (*Erythronium elegans*) - One population of Bureau Sensitive species *Erythronium elegans* was assessed for general population health, and was found to be in good condition.

WILLAMETTE VALLEY LARKSPUR (*Delphinium oreganum*): The Salem District manages one known population of *Delphinium oreganum*, a Bureau Sensitive species. Monitoring of this population was conducted and no plants were found. The lack of *Delphinium* at this location is likely due to the early mowing of roadside vegetation along this county road. None of the other known *Delphinium oreganum* sites on private ownerships in the vicinity were detectible either.

Additional plant information is presented in Tables 6 through 8.

Survey and Manage Species (S&M)

Survey and manage botanical species include vascular plants, lichens, fungi, and bryophytes. Protocols have been, or are being completed for each of the categories and are utilized by field personnel during project level survey efforts. Approximately 18,900 acres of pre-project botanical surveys were conducted, 5,800 acres for fungi and 4,400 acres for lichens, bryophytes, and vascular plants.

NOBLE POLYPORE FUNGUS (*Bridgeoporus nobilissimus*): In the Salem District, there are two populations of *Bridgeoporus nobilissimus* which have a RMP requirement to manage up to 600 acres of potential habitat around them until thorough surveys can be completed and site-specific measures prescribed. Purposive surveys were conducted for *Bridgeoporus nobilissimus* on roughly 1,200 acres of potential habitat around these known sites. One new *Bridgeoporus nobilissimus* conk was found through this inventory effort. Field data was collected for a cost share ecological study directed at learning more about the role of disturbance and coarse woody debris class on *Bridgeoporus* fruiting.

COLD WATER CORYDALIS (*Corydalis aquae-gelidae*): Three populations of *Corydalis aquae-gelidae*, a Bureau Sensitive and a Survey and Manage species, were monitored. Long term monitoring indicates that two of these populations are stable, though their size fluctuates annually. Baseline data was collected on one new population this year. One new site of *Corydalis aquae-gelidae* was found and purposive surveys were conducted on ten additional acres.

SPECIAL ATTENTION FUNGI: Two mycological Challenge Cost Share studies initiated in 1999 in a partnership with the Pacific Northwest Mycological Service were continued. The focus of these five year studies are fungal community response (particularly SA species) to different management treatments and the mycological composition within different successional stages of western hemlock forests.

Threatened \ Endangered Species

Only one federally listed botanical species (Nelson's checkermallow, *Sidalcea nelsoniana*) occurs on Salem District administered lands. No actions associated with this federally listed threatened species were conducted.

Table 8 TOTAL NUMBER OF SITES BY TAXA GROUP FOR SPECIAL STATUS PLANTS AS OF 9/30/01, SALEM BLM

Taxa Group (#species)	Federal Listed	Federal Candidate	Bureau Sensitive	Assessment Species	Tracking Species
Fungi (14)			9		186
Lichens (7)				6	9
Bryophytes (2)				4	0
Vascular Plants (20)	3		30	4	33

Table 9 TOTAL NUMBER OF SITES BY TAXA GROUP FOR SPECIAL ATTENTION PLANTS AS OF 9/30/01, SALEM BLM

Taxa Group	Category A	Category B	Category C	Category D	Category E	Category F
Fungi	9	386	0	100	0	455
Lichens	23	13	12	0	21	80
Bryophytes	4	5	0	8	0	0
Vascular Plants	0	0	6	0	0	0
Totals	36	404	18	108	21	535

Table 10 TOTAL NUMBER OF SPECIES BY TAXA GROUP FOR SPECIAL ATTENTION PLANTS AS OF 9/30/01, SALEM BLM

Taxa Group	Category A	Category B	Category C	Category D	Category E	Category F
Fungi (67)	1	55	0	8	0	3
Lichens(19)	4	6	1	0	2	6
Bryophytes (4)	2	1	0	1	0	0
Vascular Plants	0	0	1	0	0	0
Totals	7	62	2	9	2	9

Only one federally listed botanical species (Nelson's checkermallow, *Sidalcea nelsonoana)* occurs on Salem District administered lands. No actions associated with this federally listed threatened species were conducted.

SPECIAL AREAS

Areas of Critical Environmental Concern

Management plans for Areas of Environmental Concern (ACEC) are in various stages of completion and revision. General status of plans through fiscal year 2001 is shown in the following table:

Table 11 - STATUS OF ACEC MANAGEMENT PLANS

Number of (Table 2-RMP)	Number of ACECs Which Had Plans in 1995	Number of 1995 Plans Which Are Still Valid	Number of 1995 Plans That Have Been Updated or Developed Since 1995	Number of 1995 Needing Revisioning	2001 Plans and Number of ACECs That Need New Plans
26	21	9	9	4	0 / 4

Wild and Scenic Rivers

The Salem District continued to manage BLM-administered lands within the designated corridor boundaries of the Sandy, Clackamas, Salmon, Elkhorn Creek, and Quartzville Creek National Wild and Scenic Rivers (WSR's). The BLM continues to protect each river's Outstandingly Remarkable Values. The visitor contact and volunteer corridor host program along Quartzville Creek WSR continued to encourage appropriate use ethics by visitors to Quartzville Creek. The BLM also hosted a volunteer clean-up along Quartville Creek in June. A management plan for Elkhorn Creek will begin in fiscal year 2002 in partnership with the U.S. Forest Service, Detroit Ranger District as part of their planning efforts for the Opal Creek National Scenic Area. The BLM continued to provide input to the Oregon Parks and Recreation Department's Scenic Waterways Program, on private development proposals within the Sandy and Salmon River's WSR boundary. The BLM also provided input on the Federal Energy Regulatory Commisssion (FERC) relicensing process for Marmot Dam on the Sandy River. The BLM continues to work with several partners including Portland Metro, and the River Conservancy on a comprehensive Sandy River Conservation and acquisition strategy to protect resources.

Wilderness

The Salem District continued to manage Table Rock Wilderness. An Environmental Assessment (EA) was completed in fiscal year 2001, that addressed providing a new trailhead and trail to access Table Rock within the wilderness. The new trail and trailhead will replace trail and trailhead access lost in the 1996 flood event. The EA also addressed improving two other trailheads to provide safer parking with better signing related to Table Rock Wilderness and "Leave No Trace" ethics. The work is scheduled to be completed in fiscal year 2002 and fiscal year 2003. Four trailheads, signage and 16 miles of trails continued to be maintained. Pechuck Lookout, located just outside the wilderness area was also maintained in partnership with the Friends of Pechuck Lookout.

CULTURAL RESOURCES

Salem District BLM continued to actively promote appreciation of cultural resources through public education and interpretive programs. Twenty presentations reached more than 250 people. Twenty-nine elementary and middle school teachers were trained in the use of the "Exploring Oregon's Past" teacher's activity guide at an Inservice Day workshop in Salem. In addition to the Inservice workshop, Salem District distributed 50 teacher's guides to educators statewide. A traveling display on Historic Immigration and Land Use was developed and displayed at North Lincoln County Historical Society Museum. Salem District participated in the Oregon Archaeology Celebration (OAC), again providing the co-chair for its steering committee. For this annual BLM sponsored event, the District distributed materials to 755 locations including all Salem-Keizer schools, all schools in Marion and Polk counties, all Washington county libraries, nine units of the National Park Service in or near adjacent to Oregon, and to 500 schools and museums statewide. The District also facilitated the distribution of materials to all schools in Washington, Douglas, Deschutes, Union, and Crook counties.

VISUAL RESOURCES

Visual Resource Management (VRM) guidelines continued to be implemented as part of all reviewed projects and actions.

RURAL INTERFACE AREAS

Field offices review projects to determine if they are within a designated rural interface area. If appropriate, project designs may be revised or mitigating measures incorporated in order to reduce the effects to neighboring land owners. A complete report of rural interface monitoring is included in the Monitoring Report.

SOCIOECONOMIC CONDITIONS

Employment / Trends

The Salem District contains two of Oregon's population centers, Portland and Salem. These cities dominate the economic statistics for the region and are large determinants of statewide employment trends. In 2001, overall employment was up in the Portland Primary Metropolitan Statistical Area, the Salem Metropolitan Statistical Area, and in Columbia and Tillamook Counties. Benton, Clatsop, Lincoln, and Linn Counties experienced declines in overall employment. The manufacturing sector experienced job losses in most regions of the state. These losses have been attributed primarily to losses in the high tech and lumber and wood products sectors. Statewide lumber and wood products employment has continued the downward trend which began in 1989, decreasing by 1,700 jobs between 1998 and 1999. Total lumber and wood products employment in 1999 averaged 57,300 jobs within Oregon. Three counties in the Salem District countered the underlying trend and added jobs in the lumber and wood products sector; they were Clatsop, Lincoln, and Tillamook.

Receipts & Distributions

Payments in Lieu of Taxes (PILT) were made as directed in legislation. The specific amounts paid to the counties through PILT, other revenue sharing programs and through specific programs are displayed in Table 12. As federal funding for activities and contracts decreases, there is some effect on the local economy, primarily on forest related contractors and businesses.

Table 12 - SUMMARY OF SOCIO-ECONOMIC ACTIVITIES

Program Element		Fiscal Years 1996-2000 $	Fiscal Year 2001 $
District Appropriated Budget		$59,693,000	$16,187,393
Special Appropriations		$49,413,000	$3,829,164
Timber Sale Collections, O&C lands		$45,674,211	$5,488,506
Timber Sale Collections, P.D. lands		$1,925,050	$168,042
Payments to Counties (O&C)	Benton Co.	$9,482,612	$2,780,384
Titles I & III of PL 106-393 shown for 2001	Clackamas Co.	$18,729,005	$6,034,622
(See Table xx)	Columbia Co.	$6,951,665	$2,129,004
	Lincoln Co.	$1,214,855	$362,077
	Linn Co.	$8,908,930	$2,655,234
	Marion Co.	$4,926,909	$1,563,674
	Multnomah Co.	$678,309	$1,185,178
	Polk Co.	$7,289,125	$2,313,380
	Tillamook Co.	$1,889,773	$547,704
	Washington Co.	$2,125,995	$659,323
	Yamhill Co.	$2,429,709	$782,870
	Sub-Total Salem-BLM	$123,395,910	$21,013,450
Payments to Counties (PILT)	Benton Co.	$23,813	$20,327
	Clackamas Co.	$342,667	$520,873
	Clatsop Co.		$359
	Columbia Co.	$13,587	$1
	Lincoln Co.	$116,261	$183,116
	Linn Co.	$318,382	$476,022
	Marion Co.	$133,311	$203,654
	Multnomah Co.	$48,880	$75,753
	Polk Co.	$50,972	$435
	Tillamook Co.	$67,304	$92,962
	Washington Co.	$24,398	$2,608
	Yamhill Co.	$22,919	$25,790
	Sub-Total Salem-BLM	$2,138,328	$3,284,399
Value of Forest Development Contracts		$3,063,960	$651,700
Timber Sales Value (Oral Auction)		$42,027,789	$3,229,939
Number of Oral Auctions (#)		-49	-5
Negotiated Sales Value		$330,294	$56,473.80
Number of Negotiated Sales (#)		-45	-8
Jobs-in-the-Woods Funds in Contracts		$5,520,847	$798,000
Recreation Fee Demonstration Project Receipts		$1,086,308	$415,000
Value of Land Sales		158,710	0

Secure Rural Schools and Community Self-determination Act of 2000 (P.L. 106-393)

New legislation (P.L. 106-393, Secure Rural Schools and Community Self-Determination Act of 2000) was signed October 30, 2000, that extends “safety-net” payments through fiscal year 2006. Fiscal Year 2001 was the first year that payments were made to counties through the Act. Counties made elections to receive the standard O&C and CBWR payment as calculated under the Act of August 28, 1937 or the Act of May 24, 1939, or the calculated full payment amount as determined under P.L. 106-393. All of the counties in the Salem District elected to receive payments under the new legislation.

The law establishes a new formula for calculating payments which is based on selecting the highest three years in the eligibility period (1986-1999). The law also allows for annual increases in the payment based on Consumer Price Index information. Table 13 displays the payments made under each Title of P.L. 106-393 as well as the grand total. Actual payments for 2001 were made November 14, 2001.

Title I payments are made to the eligible counties based on the three highest payments to each county between the years 1986 and 1999. These payments may be used by the counties in the manner as previous 50-percent and ‘safety net’ payments.

Title II payments are reserved by the counties in special account in the Treasury of the United States for funding projects providing protection, restoration and enhancement of fish an wildlife habitat, and other natural resource objectives as outlined in P.L. 106-393. BLM is directed to obligate these funds for projects selected by local Resource Advisory Committees and approved by the Secretary of Interior or her designee.

Title III payments are made to the counties for uses authorized in P.L. 106-393. These include: 1) search, rescue, and emergency services on Federal land, 2) community service work camps, 3) easement purchases, 4) forest-related educational opportunities, 5) fire prevention and county planning, and 6) community forestry.

Table 13 - Payment to Counties through the Secure Rural Schools and Community Self-determination Act of 2000 (P.L. 106-393)

County	Title I Funds FY 2001	Title III Funds FY 2001	Title II Funds FY 2001	Total Paid to County	Total Funding
Benton	$2,597,062	$183,322	$2,780,384	$274,983	$3,055,367
Clackamas	$5,129,429	$905,193	$6,034,622	$0	$6,034,622
Columbia	$1,903,896	$225,107	$2,129,004	$110,873	$2,239,878
Lincoln	$332,719	$29,357	$362,077	$29,357	$391,435
Linn	$2,439,944	$215,289	$2,655,234	$150,702	$2,870,523
Marion	$1,349,363	$214,310	$1,563,674	$23,812	$1,587,486
Multnomah	$948,142	$237,035	$1,185,178	$0	$1,185,178
Polk	$1,996,318	$317,062	$2,313,380	$35,229	$2,348,610
Tillamook	$517,564	$30,140	$547,704	$61,194	$608,898
Washington	$582,259	$77,063	$659,323	$25,687	$685,011
Yamhill	$665,439	$117,430	$782,870	$0	$782,870
TOTAL	$18,462,135	$2,551,308	$21,013,450	$711,837	$21,789,878

The Salem District, in coordination with other federal, state, and local governments, continued to participate in the "Jobs-in-the-Woods (JIW) / Watershed Restoration Program". The program provides on-the-job training opportunities for people displaced from forestry related work. These people were hired to work on crews restoring fish and forest habitat. In addition to hiring crews, funds from this program were used to hire local area contractors to do restoration work. More specific JIW information is discussed in section 17C below.

Jobs-in-the-Woods Program

The Jobs-in-the-Woods (JITW) program normally contributes to the completion of numerous ecosystem improvement projects categorized as follows:

1.) Eleven road erosion and sediment stabilization projects, such as closing/ blocking roads, installing gates, replacing culverts, and improving road ditches.

2.) Seven riparian silviculture projects, such as timber stand density treatments (thinning young stands), converting stands to mixed conifer, and creating down woody debris.

3.) Two stream channel restoration projects, such as installation of fish passage culverts and in-stream structures, repair of log and boulder structures and pools.

4.) Eight upland silviculture projects, such as upland stand density management, habitat diversification, down and wood debris creation, and site preparation.

5.) Seven inventory/data collection and planning projects, such as collection of biological and physical data in streams, riparian areas and upland sites, stand exams, habitat and population inventories and watershed analysis.

6.) One recreation facilities development project, such as improvement of campgrounds and trails, signing, outdoor education sites.

Some projects have been counted in more than one category (i.e. some silviculture projects may include upland and riparian tracts). In fiscal year 2001, JITW dollars funded 34 projects for $798,000 in ten counties within four congressional districts.

Environmental Justice

Executive Order 12898 issued February 11, 1994, states: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations directs all federal agencies to ". . . make achieving environmental justice part of its mission by identifying yearing and addressing . . .disproportionately high and adverse human health or environmental effects of it's programs, policies and activities."

New projects with possible effects on minority populations and/or low-income populations will incorporate a consideration of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified, and reduced to acceptable levels if possible. In the Salem District this was completed for all projects subject to NEPA in 2001.

RECREATION & OFF HIGHWAY VEHICLE (OHV) MANAGEMENT

Developed Recreation Sites

Over 317,800 people visited Yaquina Head Outstanding Natural Area and $287,900 in fees were collected in fiscal year 2001. Approximately 183,500 people visited developed fee demonstration recreation sites in the Salem District and almost $160,000 in fees were collected from these sites. All fees collected in the Salem District were retained for use to maintain or enhance the sites they were collected at, as part of the Fee Demonstration Program. Numerous projects were also completed with recreation pipeline funding. All of the developed recreation sites continued to provide a high quality recreation experience. Visitation on all BLM-administered lands in the Salem District was estimated to be over 1.5 million visitors.

Special Events/Recreation Partnerships

The Salem District organized or participated in several special events including a National Trails Day event at the Molalla Trail System, and a National Public Lands Day at the Larch Mountain Environmental Education Site. The Salem District hosted the Songbird Celebration at Wildwood Recreation Site, which attracted over 1,500 people and featured 28 exhibitors, educational displays and presentations, guided bird walks, bird banding demonstrations, live bird presentations, childrens' activities, field ecology exercises, music and other live performances. The Salem District also sponsored and participated in the Salmon Festival. This event provided 7,700 visitors an opportunity to see wild salmon spawning in the Sandy Wild and Scenic River and to learn more about the importance of watersheds and fisheries from 50 exhibitors (including BLM). The Salem District continued to coordinate the staffing for the BLM Cabin at the Oregon State Fair, and to participate in several county fairs.

Non-motorized Trails

Approximately five miles of hiking and mountain biking trails where added to Alsea Falls Recreation Site. This project greatly enhances the trail system available at Alsea Falls. Fee demonstration funds helped purchase the materials needed. State prison crews and BLM staff were used to construct the trails, to help keep labor costs low.

Fifty miles of trails were maintained on the Molalla Shared-Use Trail System. Hardy Creek Trailhead was also maintained. The Salem District continued to work in partnership with Molalla Riverwatch and several other user groups on trail work projects. Fifteen volunteer work parties contributed to the trail maintenance programs on these trail systems.

Special and Extensive Recreation Management Areas (SRMA's and ERMA's)

Management, improvements, monitoring, and visitor services of SRMA's was continued throughout the district. Particular efforts related to facility management, visitor contact and resource protection were focused on the Molalla River/Table Rock, Sandy, Mount Hood, Yellowstone, and Nestucca SRMA's. Resource protection, restoration, signing, and law enforcement highlight activities in the Salem District's ERMA's.

Sanitation and resource protection were improved along the Molalla River in the Molalla River/ Table Rock SRMA. Recreation Pipeline funds were used to better limit vehicle access to riparian

areas along the river and two new restrooms were installed in high use areas. One of the restrooms was obtained through a $10,000 private donation to Molalla RiverWatch.

Back Country Byways

The Salem District continued to maintain signs and facilities along the Quartzville, South Fork Alsea, and the Nestucca National Back Country Byways.

Off-Highway Vehicle (OHV) Areas

The Salem District continues to manage OHVs in compliance with the BLM RMP/ROD. The BLM also completed a *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands*. This strategy provides guidance to the Salem District and other BLM offices nationwide on the management of Off-Highway Vehicle Use. If you would like a copy of the strategy go to www.or.blm.gov.salem or contact the Salem District Office.

The Salem District worked in partnership with the Applegate Roughriders, to maintain the Nestucca Trail System. Almost 10 miles of trail maintenance was completed by the Applegate Roughriders in fiscal year 2001. An additional 7.6 miles of trail maintenance and rehabilitation work such as trail hardening, installing water diversions, and replacing trail tread and culverts in several locations was also completed through a grant obtained by the Applegate Roughriders from the Oregon State Park's "All Terrain Vehicle Grant Program." Approximately 0.9 miles of trail were closed and rehabilitated.

FOREST MANAGEMENT & TIMBER RESOURCES

Timber Harvest Activities

In FY2001 the Salem District sold 19.3 million board feet (MMBF) of timber. This represents 55% of its 35 MMBF allowable sale quantity. Cumulative information on timber harvest acres, volumes, and harvest types since the beginning of the RMP are provided in Tables 14 through Table 21.

Except for the District declared Allowable Sale Quantity, projections made in the RMP are not intended as management action/direction, but rather are underlying RMP assumptions. Projected levels of activities are the approximate level expected to support the Allowable Sale Quantity.

Unresolved litigation and uncompleted strategic surveys under Survey and Manage have limited the ability to offer timber sales at the levels anticipated by the RMPs during fiscal year 2001 and prior years. It is not possible at this time to accurately predict the duration or effect of these short term uncertainties on the long term ability to implement the underlying assumptions that form the basis of the Allowable Sale Quantity. Therefore, changes to the RMP based on the inability to implement timber resources decisions and assumptions in fiscal year 2001 would be premature at this time. These circumstances will be more closely examined during the next RMP evaluation.

Through the end of fiscal year 2001, over the six year life of the RMP, the Salem District is at 90% of the RMP anticipated total offered timber sale volume from all land use allocations, 33% of matrix harvest, 100% of RMP anticipated density management harvest, and 44% of RMP

anticipated harvest in the North Coast Adaptive Management Area. The acreage of commercial thinning during this period is 40% of that anticipated for the decade in the RMP.

Table 14 - Summary of Timber Volume Sold

Sold ASQ/Non ASQ Volume	FY95-98	FY99-01	FY95-01 Total	FY95-01 Declared ASQ
ASQ Volume - Harvest Land Base	117.0 [1]	27.8	144.8	243.6 [2]
Non ASQ Volume - Reserves	12.0 [1]	7.6	19.6	n/a
Total	**129.0 [1]**	**35.4**	**164.4**	**n/a**

Sold Unawarded ASQ/Non ASQ Volume (as of 9/30/01)	FY95-98	FY99-01	FY95-01 Total
ASQ Volume - Harvest Land Base	10.1 [1]	0.0	10.1
Non ASQ Volume - Reserves	0.7 [1]	0.0	0.7
Total	**10.8 [1]**	**0.0**	**10.8**

[1] Third Year Evaluation - Figure V12-1 plus volume sold in FY95 prior to signing of the RMP

[2] Declared annual ASQ times 7. Coos Bay & Eugene FY95-98 ASQ times 4 + FY99-01 ASQ times 3

Table 15 - Summary of Timber Volume and Acres Sold by Allocation

ASQ Volume - (Harvest Land Base)	FY95-98	FY99-01	FY95-01 Total	Decadal Projection Matrix
Matrix	106.7 [3]	25.2	131.9	328.6 [3]
AMA	6.8 [3]	2.6	9.4	19.5 [3]

ASQ Acres - (Harvest Land Base)	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
Matrix	3,255 [3]	857.0	4112.0	9,214 [3]
AMA	411 [3]	168.0	579.0	2,141 [3]

Key Watershed ASQ Volume - (Harvest Land Base)	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
Key Watersheds	5.8 [4]	4.5	10.3	32.0 [4]

[3] Third Year Evaluation - Figure 12-7 plus volume sold in FY95 prior to signing of the RMP.

[4] Third Year Evaluation - Figure 12-8 plus volume sold in FY95 prior to signing of the RMP

Table 16 - Summary of Timber Sales Sold by Harvest Types

ASQ Volume - (Harvest Land Base)	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
Regeneration Harvest	79.3 [5]	14.6	93.9	298.6 [5]
Commercial Thinning & Density Management	28.7 [5]	12.2	40.9	49.5 [5]
Other	5.5 [5]	1.0	6.5	0.0 [5]
Total	**113.5 [5]**	**27.8**	**141.3**	**348.1 [5]**

ASQ Acres - (Harvest Land Base)	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
Regeneration Harvest	1,620 [5]	238.0	1858.0	5,558 [5]
Commercial Thinning & Density Management	1,884 [5]	755.0		
	2639.0	5,797 [5]		
Other	162 [5]	32.0		
	194.0	0 [5]		
Total	**3,666 [5]**	**1025.0**	**4691.0**	**11,355 [5]**

Reserve Acres	FY95-98	FY99-01	FY95-01 Total
Late-Successional Reserves	154 [6]	202.0	356.0
Riparian Reserves	381 [6]	161.0	542.0
Other Reserves (Admin. Withdrawn, etc.)	0 6	50.0	50.0
Total	**535 [6]**	**413.0**	**948.0**

[5] Third Year Evaluation Figure 12-4 plus volume sold in FY95 prior to signing of the RMP

[6] Third Year Evaluation Section 12-F - Harvest from Reserves plus acres sold in FY95 prior to signing of the RMP.

Table 17 - TIMBER SALE VOLUMES - ANNUAL PROJECTIONS VS. OFFERED
FY 95-01*

	Volume Offered (MMBF)*								
Land Use Allocation	Project Annual @ Full ASQ**	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY01	Total FY 95-01
AMA	1.950	2.209	1.779	5.549	0.425	0.000	0.000	2.537	12.499
Matrix (GFMA)	29.750	13.843	22.293	29.659	42.574	6.279	6.403	4.687	125.738
Connectivity	3.110	0.000	0.000	0.632	0.000	0.000	4.544	3.913	9.089
Misc. From Above LUAs	0.000	0.139	0.723	2.120	1.369	0.602	1.104	0.139	6.196
Total Volume Off ASQ Lands	34.810	16.191	24.795	37.960	44.368	6.881	12.051	11.271	153.522
LSR Volume (Density Mgt.)	N/A	0.000	2.606	0.000	0.000	3.559	1.131	0.024	7.320
RR Volume (Density Mgt.)	N/A	0.072	1.618	4.396	1.328	0.000	0.764	1.233	9.411
Misc. Volume (LSR, RR)	N/A	0.223	0.122	1.062	0.187	0.000	0.615	0.014	2.223
Total Volume Off Non-ASQ Lands	N/A	0.295	4.346	5.458	1.515	3.559	2.510	1.271	18.954
Total Volume Offered	*N/A*	*16.486*	*29.141*	*43.418*	*45.883*	*10.440*	*14.561*	*12.547*	*172.476*
District Budget Target Volume	*N/A*	*23.000*	*29.000*	*35.000*	*35.000*	*35.000*	*15.000*	*20.000*	*192.000*

* MMBF = million board feet
** Projected figures are 1/10th of the decadal projection
*** FY95 volumes from date of RMP signing in May, 1995.
Volumes in Appendix 1 are cumulation of volumes in Appendices 3 & 4 plus miscellaneous volume.

Table 18 - Summary of Timber Sale Acres Sold by Age Class***

Regeneration Harvest (Harvest Land Base)*	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
0-70	3535	140	493	8805
80-140	11685	68	1236	40355
150-190	435	30	73	1755
200+	465	0	46	4685
Total	**16105**	**238**	**1848**	**55585**

Density Management , Commercial Thinning & Other (Harvest Land Base)**	FY95-98	FY99-01	FY95-01 Total	Decadal Projection
0-70	18715	710	2581	556475
80-140	1845	77	261	1505
150-190	15	0	1	5
200+	5	0	0	5
Total	**20565**	**787**	**2843**	**57975**

[5] Third Year Evaluation Figure 12-4 plus volume sold in FY95 prior to signing of the RMP.
*Clearcut Right-of-Way acres were included in Regeneration Harvest.
**Modifications and negotiated acres were included in Density Management.
***Based on the Harvest age class in the FOI 1992 which represents the stands age class at the time of the RMP decadal projection.

Table 19 - Summary of Regeneration Timber Sale Volume Offered

Comparison of projected vs. offered volume by Land Use Allocation (LUA)
Fiscal Years 1995-2001

Land Use Allocation	Total District Cumulative MMBF* Offered FY 95-00**	District MMBF Offered FY01	Total District Projected MMBF For Decade 1995-2005
Matrix(GFMA)	97.885	0.141	274.500
Connectivity	0.276	0.000	24.100
LSR***	0.375	0.033	N/A
AMA***	0.000	0.000	N/A
Other	0.000	0.092	N/A
Totals	98.537	0.266	298.600

* MMBF = million board feet
** FY95 only includes sales after May RMP decision date.
*** No regeneration harvest projected in LSR or AMA.

PSQ= Probable Sale Quantity

Table 20 - Summary of Thinning and Density Management Timber Sale Volume Offered
Comparison of projected vs. offered volume by land use allocation (LUA)
Fiscal Years 1995-2001

Land Use Allocation	Total District Cumulative MMBF* Offered FY 95-00**	District MMBF Offered FY01	Total District Projected MMBF For Decade 1995-2005
Matrix*** (GFMA)	28.813	5.784	23.044
Connectivity***	0.356	3.913	6.952
AMA****	6.124	2.537	19.477
Total ASQ	35.293	12.234	49.473
Riparian Reserve	8.174	0.000	N/A*****
LSR / AMR	7.570	0.024	N/A*****
Total Non-ASQ	15.744	0.024	N/A*****
Grand Total	51.037	12.258	63.295

* MMBF = million board feet ** FY95 only includes sales after May RMP decision date
Commercial thinning projected in these LUAs. * Density Management projected in AMAs
***** No projections made for LSR / RR.

Table 21 - Summary of Regeneration Timber Sale Acres Offered
Comparison of projected vs. offered harvest acres by land use allocation FY 95-01

Land Use Allocation	Total District Cumulative Acres Offered FY 95-00	District Acres Offered FY01	Total District Projected Acres For Decade 1995-2005
Matrix (GFMA)	1901.5	6	4971
Connectivity	12	0	587
LSR*	42.5	0	N/A
AMA*	0	0	N/A
Other	0	17	N/A
Totals	1956	23	5558

*** No regeneration harvest projected in LSR or AMA**

Table 22 - Summary of Thinning and Density Management Timber Sale Acres *
Comparison of projected vs. offered acres by Land Use Allocation (LUA) FY 95-01

Land Use Allocation	Total District Cumulative Acres Offered FY95-00	District Acres Offered FY 01	Total District Projected Acres For Decade 1995-2005
Matrix** (GFMA)	1833	321	2920
Connectivity**	25	58	736
AMA***	409	164	2141
Total ASQ Lands	2267	543	5797
LSR***	442	1	3316
RR	450	48	None
Total Non-ASQ Lands	892	49	3316
Grand Total	3159	592	9113

* Information from TSIS ** Commercial thinning projected in these LUAs.
*** Density Management projected in AMAs.

Silviculture Activities

Silvicultural accomplishments in 2001 were diverse and addressed a range of forest management challenges. Silvicultural activities for the year are summarized in Table 23.

The reforestation process includes site preparation, tree planting, seedling production practices to produce desired plants, genetic tree trait conservation and young stand maintenance (methods of vegetation control and/or protection from animals, insects and disease). Site preparation practices were below amounts projected in the RMP, but in the same range as previous years. Tree planting levels nearly exactly matched RMP projected levels. An increasing variety of tree species are used in reforestation. The Salem District collected a good supply of western hemlock, Noble fir, and western redcedar seeds for future plantings. Under-planting in forest thinnings associated with research and activities in riparian areas have increased.

Less genetically selected tree seedlings were used in plantings due to alternative species used in swiss needle cast infected areas along the coast and a lack of supply of seedlings. The availability of genetically selected seedlings is expected to increase in the near future. Genetic stock is managed for maintenance of genetic diversity as well as faster growth and disease resistance.

BLM is a participant in cost-share partnerships with other public and private agencies in a second generation tree improvement program. Progeny test site measurements and maintenance are done on a regular schedule.

Stand maintenance accomplished nearly exactly match RMP projected amounts for the year. Young stand maintenance/protection reflects a sequence of multi-year treatments that are needed to assure successful young stand establishment by providing “free-growing” conditions. Maintenance is necessary to address the ongoing brush competition in Swiss needle cast infected areas where the Douglas fir trees have been weakened from the disease allowing intense brush competition. Protection includes trapping, tubing, and pruning (white pine blister rust control) to ensure conifer survival.

The amount of precommercial thinning accomplished was the second highest for one year since 1995. Thinning is the most common forest growth enhancement treatment. Thinning can be used to concentrate growth on the more desirable trees, attain a desired species composition, develop individual tree attributes (large boles or limbs), or promoting understory vegetation. Thinning and fertilization of young coastal stands within 15 miles of the ocean were deferred due to the acceleration of the Swiss needle cast disease and the deleterious effects it has on the trees.

No fertilization or pruning was planned or done in the district. A timber sale was used to convert the species mix in one forest stand.

Forest surveys (stand exams) were implemented in the matrix and late-successional reserve areas for data collection and analysis of potential future treatments.

Table 23- SILVICULTURE PRACTICES - MODEL PROJECTIONS VS. ACTUAL

Silvicultural Practice	Annual Projected Amount (acres)	Actual Amount (acres) FY 95 (part)	Actual Amount (acres) FY 96	Actual Amount (acres) FY 97	Actual Amount (acres) FY 98	Actual Amount (acres) FY 99	Actual Amount (acres) FY 00	Actual Amount (acres) FY 01	Total Acres treated FY95-01
Site preparation / Prescribed fire*	480	88	183	263	330	245	284	229	1622
Site preparation / other*	590	157	224	646	220	642	730	334	2953
Maintenance / protection**	3130	3907	2632	2399	2244	2102	2906	3,086	19,276
Release / Precommercial thinning (PCT)**	2970	1419	2609	1250	1172	1330	711	1,962	10,453
Stand conversion**	90	5	0	0	0	0	50	0	55
Plant regular stock*	480	0	478	520	343	382	577	490	2,790
Plant genetic stock*	450	0	156	131	186	345	169	212	2,379
Fertilization**	600	0	0	0	1671	2974	0	0	4,645
Pruning	None projected	14	113	0	158	65	0	0	350

* These particular items are directly related to acres harvested. Funding was sufficient to complete all available acres.
** These items are related to need and budget levels, so actual amounts will vary from year to year.
NOTE: This table displays treatment acres differently, and shows different treatment acres than 1995 -1999 editions of the APS. The difference is the result of using a more consistent methodology for sorting treatment acres into various practices and fiscal years.

Special Forest Products (SFP)

Nearly 600 contracts for special forest products were issued during 2001. The permits resulted in $51,277 in receipts. The greatest number of permits were issued for mushrooms. However, the greatest amount of product (266,000 pounds) and receipts ($18,873) were for floral and related greenery products. Appendix 9 summarizes all the SFP sales for fiscal year 1996 through 2001. It provides an opportunity to observe fluctuations from year to year, and to identify which products were of most interest during a particular year.

The Salem District follows the standards and guidelines set forth in the Oregon/Washington Special Forest Products Procedure Handbook. Each Resource Area established specific guidelines for the management of individual special forest products within their area using an interdisciplinary approach. These guidelines can be found in each Resource Area's NEPA document for SFP.

NOXIOUS WEEDS

The Salem District's noxious weed program objectives are to contain and/or reduce noxious weed infestations on BLM-administered lands using an integrated pest management approach and to avoid introducing or spreading noxious weed infestations. The Salem District continues to survey BLM-administered land for noxious weed infestations through systematic surveys and in the course of project planning (see Table 11). Infestations are reported to the Oregon Department of Agriculture, and the district cooperates with the department to control infestations. Integrated pest management includes chemical, mechanical, manual and biological methods which are used in accordance with BLM's 1985 *Northwest Area Noxious Weed Control Program Environmental Impact Statement*, and 1987 Supplement, and respective Records of Decision.

Infestations of invasive exotic plant species threaten riparian habitats in the Sandy River Gorge ACEC and adjacent ownerships. Challenge Cost Share funding has allowed the BLM to participate in a large partnership led by The Nature Conservancy to conduct inventories and treat infestations of Japanese knotweed and other invasive exotics along the Sandy River.

In the Tillamook Resource Area, a variety of locally adapted native trees and shrubs were planted on approximately 70 acres to restore a reed canary grass infested riparian area and a Scotch broom infested upland to native plant communities.

Noxious weed risk assessments have been integrated into all project surveys. The District has averaged 5,000 acres of surveys over the last six years. The majority of new noxious weed sites have been found through systematic roadside inventories. Sites that have been identified through project planning and inventories have been managed in accordance with the Resource Management Plan

The district is growing a small amount of native shrub seedlings and collecting some native grass seed to plant in selected locations.

Table 24 - MANAGEMENT ACTIONS TO CONTROL NOXIOUS WEEDS

Treatment	Species	Fiscal year 96 thru 00 Acres	Fiscal year 2001 Acres
Manual	Scotch Broom	310	85
	Meadow Knapweed	7	1
	Spotted Knapweed	10	2
	Diffuse Knapweed	1	0
	Japanese knotweed	14	14
	Gorse	10	0
Biological	Scotch Broom	100s	100s
	Canada Thistle	1500	500
	St.John's Wort	600	200
	Bull Thistle	750	250
	Tansy Ragwort	1000s	1000s

WILD FIRE AND FUELS MANAGEMENT

Fiscal year 2001 was a very mild year for wild fires on the Salem District, even though we were experiencing some degree of drought. A harsher fire season had been predicted than what we actually experienced. The Salem District had 12 fires, nine of which were human caused and three were caused by lightning. 1.4 acres were burned. Fire prevention, detection, and suppression continues to be handled through the Western Oregon Protection Contract with the Oregon Department of Forestry.

There were no escaped fires during fiscal year 2001 which required a Wildfire Situation Analysis (WFSA).

Nine prescribed burns totaling 303 acres were accomplished during fiscal year 2001. All areas were successfully treated within the parameters set forth in the approved burn plans. Several of our prescribed fire managers also assisted other agencies in accomplishing their prescribed fire objectives.

ACCESS and RIGHTS-OF-WAY

Access, whether acquired by the BLM to cross non-BLM lands or by private landowners to cross BLM lands, is accomplished through several methods. BLM and numerous private industrial landowners have reciprocal right-of-way agreements, which have existed for many years. These agreements facilitate access through the complex checkerboard ownership pattern of Salem-BLM lands. Other individual rights-of-way are occasionally issued by the BLM for such things as driveways, power lines, and communication sites. Easements are also commonly used to attain BLM access over private property.

During fiscal year 2001, four amendments were completed updating three reciprocal right-of-way agreements. That brings the total updates since implementation of the RMP (1995-2001) to 47. In addition, sixteen individual rights-of-ways were issued, for a total of 48 since 1995. BLM administered lands will continue to be available for rights-of-way when consistent with land use planning, local comprehensive plans and Oregon State laws.

Refer to “Land Tenure Adjustments” for information on easement acquisitions.

ROADS

The Salem District manages approximately 2400 miles of roads. BLM road maintenance crews accomplished 423 miles of surface blading, 384 miles of road brushing and removed 15,434 cubic yards of ditch debris or slide material. Work to be completed was prioritized based on “use” of main arterial and collector roads. Maintenance was deferred on 1,900 miles of road due to insufficient funds. In addition, combined BLM and USFS crews accomplished 225 miles of surface blading, 300 miles of brush cutting and removal of 13,589 cubic yards of ditch debris or slide material from the Willamette and Siuslaw National Forests road system. Other maintenance work accomplished included ditch pulling, bridge deck cleaning, culvert cleaning, and road shoulder maintenance.

The Salem District constructed 1.03 miles of new road and reconstructed 3.2 miles of roads associated with timber sales. Approximately 15.4 miles of road were decommissioned or obliterated, four miles of road were storm proofed to prevent damage from excess water associated with winter storms and 16.1 miles of road were closed or gated to reduce road related impacts to wildlife. The Tillamook Resource Area completed an Environmental Assessment for Road Stabilization and Watershed Restoration in the Yamhill Basin. This analysis addressed the treatment of 70 miles of road to be completed within the next 10 years depending on available funds. The estimated treatment cost is $770,000.

The Salem District installed 93 replacement or new culverts. The majority of these were 24 inch ditch relief culverts, but there were also several large fish passage culverts installed including a 20' by 13' arch culvert placed in a stream within a timber sale contract.

The intense winter storms of 1999 and 2000 resulted in 30 damaged sites on roads to be repaired by the Salem District. With the exception of four of these flood damaged sites, all sites are either repaired, under contract to be repaired, or advertised for a contract. The remaining four sites will be under contract or repaired by September 2002.

ENERGY AND MINERALS

The Salem District issued 4 permits for disposal of 212 cubic yards of mineral material (rock) in fiscal year 2001.

LAND TENURE ADJUSTMENTS

Land Exchanges, Purchases, Land Sales, and Leases

The District completed no land exchanges in fiscal year 2001. Since implementation of the RMP (1995-2001), a total of 4,524 acres have been acquired by the BLM in 7 land exchanges, while 2,240 acres have been conveyed out of Federal ownership by exchange. In fiscal year 2001, the Salem District used Land and Water Conservation Funds to purchase three parcels totaling 230.01 acres. Refer to Appendix 10 for a summary of completed land exchanges and purchases.

The District completed no land sales in fiscal year 2001. Since 1995, a total of 16 sales have resulted in conveyance of 15.82 acres. These lands were mostly isolated parcels of BLM-administered land targeted for disposal under the RMP. Refer to Appendix 11 for summary of completed land sales.

There were no new easements acquired in fiscal year 2001. Since 1995, 20 easements have been acquired. These easements provide legal access across parcels of non-federal land over roads and trails to BLM administered land and facilities. Easements and fee acquisitions for recreation, timber management, conservation or scenic protection, and/or other administrative purposes will continue to be acquired where and when needed to support BLM program objectives.

No new leases were issued. Since 1995, three Recreation and Public Purposes (R&PP) leases have been issued.

Future sales, exchanges and purchases will be affected by two statutes. The first, P.L. 105-321, the "Oregon Public Lands Transfer and Protection Act of 1998." Among the requirements of the act is a policy of "no net loss of O&C land, CBWR land, or public domain land" in carrying out sales, purchases, and exchanges in the geographic area which includes the Salem District. The second, P.L. 106-248, the "Federal Land Transaction Facilitation Act" states that the gross proceeds of the sale or exchange of public land under this Act shall be deposited into a separate account in the Treasury of the United States to be known as the "Federal Land Disposal Account." Receipts generated from this act may be available for future land acquisitions within the Salem District.

Withdrawals

No withdrawals have been initiated since implementation of the RMP. In fiscal year 2001 the Salem District recommended that the Oregon State Director not accept the return of 1,120.08 acres of withdrawn public domain land from the Department of the Army, Corps of Engineers to BLM. This allowed the Department of the Army to dispose of 1,321.07 acres of excess lands, including 1,120.08 acres of withdrawn public domain land at Fort Stevens, near the mouth of the Columbia River, in Clatsop County. We expect that the land will be transferred to the State of Oregon and be available for future public use.

HAZARDOUS MATERIALS

Two abandoned hazardous sites were discovered and cleaned in 2001. Since 1995, BLM has identified 30 potentially hazardous abandoned waste sites on BLM administered lands. Twenty four of the 30 were determined to be hazardous and cleaned up. Abandoned hazardous wastes removed from federal lands included: drug lab waste, abandoned barrels of acids and heavy metals, dynamite and explosives, oil based paints, pesticides, and used paint thinners, lead contaminated soils, and solvents.

All existing underground fuel storage tanks at the district and field offices have been removed and where needed, replaced with approved above ground storage tanks. One decommissioned underground storage tank site was evaluated, and achieved no further action status from the Oregon Department of Environmental Quality (ODEQ). Another underground storage tank site is currently under review in conjunction with ODEQ. A recently discovered underground storage tank is suspected on a parcel acquired in 1989. The District is currently evaluating the site.

The Salem District participated in a voluntary assessment known as a *Compliance Assessment - Safety, Health, and the Environment* (CASHE) in March of 1997. The CASHE assessment process was developed to identify environmental compliance issues that may exist at BLM facilities, and determine how to correct them. At the end of the 2001 fiscal year, 98 percent of the CASHE findings have been resolved, and all the remaining findings are progressing toward resolution.

The Environmental Protection Agency (EPA) conducted a voluntary Environmental Management Review (EMR) of the Salem District in March, 2000. An EMR is an evaluation of an organizations environmental program and management systems. EPA produced a final report identified suggested changes to BLM practices and procedures to improve environmental compliance. In 2001, BLM submitted a response to EPA outlining proposed actions within the agency.

Lead paint was removed from the interior walls of Yaquina Head Lighthouse. The paint waste was treated with a product designed to bind with lead, creating non- hazardous waste. The process reduced hazardous waste from the site by 31,000 pounds.

COORDINATION AND CONSULTATION

Federal Agencies

From 1995 through 2001, significant increases in cooperation and coordination between federal agencies has been accomplished. Provincial Interagency Advisory Committees (PIECs), organized in accordance with the Northwest Forest Plan include the following federal agencies: Bureau of Land Management, Forest Service, Bureau of Indian Affairs, Fish & Wildlife Service, Environmental Protection Agency, National Marine Fishery Service, and Natural Resource Conservation Service. In addition, personnel from several of these agencies have been involved in project level planning, conflict resolution, Endangered Species Act consultation, and implementation monitoring.

State of Oregon

The Salem District continued its long term working relationships with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, and Oregon Department Environmental Quality. These relationships cover a diverse assortment of activities from timber sale planning to fish habitat inventory, from water quality monitoring to hazardous material cleanup, and air quality maintenance to wildfire suppression.

Counties

The Salem District administers land in 13 separate counties. While involvement levels vary between counties based on amount of BLM lands, there is frequent mail and telephone contact with various county commissioners and other staff. These involve BLM proposed projects, county projects which may affect BLM lands, water quality, and other issues. County commissioners receive copies of all major publications, project updates, and project proposals.

Cities

The Salem District has had increasing its involvement with several city governments. BLM works with the cities to ensure that timber harvest and road building are done in a manner to maintain

water source conditions in the watershed used by the cities for their drinking water.

Tribes

Coordination with Native American groups has broadened as a result of the NFP. Several Tribes are represented on the Oregon Coast and Willamette Provincial Advisory Committees and the Resource Advisory Committee, where they participate with other interests in providing advice on activities within the province. Tribal notification was made for projects as appropriate.

Watershed Councils

In fiscal year 2001, the Salem District continued to participate and support local watershed councils (WC). The watershed councils provide a forum for exchanges of information and ideas among all interested stakeholders about the activities proposed or occurring with a watershed. Table 25 shows the current status of Salem District involvement in local watershed councils.

Table 25 - Salem District Involvement with Local Watershed Councils

Watershed Council	Resource Area	Status of Involvement 2001
Alsea	Marys Peak	Attend monthly meetings
Clackamas River Basin	Cascades	Share a seat on the Council with the Forest Service. Attend some meetings. Participating in a watershed analysis of the lower reaches of the river that includes some BLM ownership.
Lower Columbia River WS Council	Cascades	Not involved at this time
Lower Nehalem WS Council	Tillamook	Not actively involved at this time. Occasional meetings with members.
Luckiamute	Marys Peak	Attend monthly meetings, provide technical assistance.
Marys River WS Council	Marys Peak	Attend monthly council meetings. Member of the council.
Mid-Coast WS Council	Marys Peak	Attend council meetings and technical committee meetings. BLM not a member of the council. Helped fund a watershed analysis for Rock Creek subwatershed.
Nestucca/Neskowin WS Council	Tillamook	Attend monthly council meetings and technical committee meetings. BLM not a member of the Board. W.C. reviews BLM projects. Participates in water quality monitoring partnership.
North Santiam	Cascades	Participating in a watershed analysis of the lower reaches of the river that includes some BLM ownership. Attends all assessment committee meetings and some of the monthly council meetings.
Pedee Ritner Creek	Marys Peak	Periodically attend monthly meetings.
Pudding River Watershed Council	Cascades	Attend monthly meetings. Technical advisory role only.
S.Santiam WS Council	Cascades	Attend most monthly council meetings. Member of the council. Supply technical support for water quality monitoring.
Sandy Basin WS Council	Cascades	Attend some monthly council meetings. Work with council on projects within the basin.
Scappoose Bay WS Council	Tillamook	Attend meetings. W.C. involved in BLM project review. Working on joint restoration projects.
Siletz	Marys Peak	Sometimes attend monthly meetings.
Tillamook Bay WS Council	Tillamook	Member of Board. Attending startup organizational meetings.
Tualatin Watershed Council	Tillamook	Attend monthly council meetings and technical committee meetings. Not a member of the council. Working on joint watershed analysis/assessment.
Upper Nehalem	Tillamook	Attend meetings and provide technical support. Working on joint project planning.
Yamhill Basin Council	Tillamook & Marys Peak	Attend meetings. W.C. participates in BLM Adaptive Management Area (AMA) planning. W.C. reviews BLM projects. BLM member of council. Participates in water quality monitoring partnership.

Tillamook Bay National Estuary Project

BLM is a member of the Tillamook County Performance Partnership (a local, state, and federal partnership). The Performance Partnership oversees the implementation of the Comprehensive Conservation Management Plan developed by the Tillamook Bay National Estuary Project Management Committee over a five year period.

National Environmental Policy Act (NEPA) Documents

A log book of all NEPA documents prepared by the Salem District is maintained at the public service desk. In addition, the quarterly project update publishes the availability of specific environmental documents and their stage of preparation. This is a vital part of scoping and public comment policy for all projects. Individual project NEPA documents are also advertized in local newspapers when public review periods are opened and are being put on the Salem District's WEB site.

Internet

Salem-BLM has an internet web site (http://www.or.blm.gov/salem). Documents and information were made available to the public through this mechanism. Planning and environmental documents, recreation information, maps, directories and numerous other informative items maintain communication between Salem-BLM and the public.

THIRD YEAR EVALUATION

On July 31, 2001, the Oregon/Washington State Director, Bureau of Land Management (BLM), released the following findings based on the Third Year Plan Evaluation for the Salem District. The period evaluated was 1995- 1998.

> "Based on this plan evaluation which included information through fiscal Year 1998, I find that the Salem District RMP goals and objectives are being met or are likely to be met, and that the environmental consequences of the plan are similar to those anticipated in the RMP FEIS and that there is no new information, as of September 30, 1998, that would substantively alter the RMP conclusions. Therefore a plan amendment or plan revision of the Salem District RMP is not warranted. This document meets the requirements for a plan evaluation as provided in 43 CFR 1610.4-9."

An executive summary and the entire evaluation document are available, free of charge, upon request. Contact the Salem District to obtain a copy.

RESEARCH AND EDUCATION

The Salem District has a long-term relationship with the research community centered at Oregon State University (OSU) in Corvallis. Cooperative research is conducted by various departments of OSU, the Pacific Northwest Research Station, the Forest and Rangeland Ecosystem Science Center (FRESC) of the U. S. Geological Survey, Biological Resources Division (BRD); and other

federal agencies. The BRD was formed when USDI consolidated its research personnel into one agency. Together with the BLM and other USDI agencies, the BRD conducts an annual evaluation of ongoing and proposed research projects, choosing the ones to fund in the context of current and future research needs; each westside BLM District has a representative at these periodic meetings. Projects relating to the ongoing implementation of the Northwest Forest Plan (NFP) have consistently done well in securing funds through this process.

The Cooperative Forest Ecosystem Research (CFER) program was initiated in June 1995. Cooperators include the BLM, FRESC, OSU - Colleges of Forestry and Agricultural Sciences, and the State of Oregon Department of Forestry (ODF). The intent of the program is to facilitate ecosystem management in the Pacific Northwest, with emphasis on meeting priority research information needs of the BLM and ODF. The research problem analysis in support of the CFER program was produced in June 1997, and identified three areas where research is needed to support implementation of the NFP: 1), the ecology and management of biodiversity of young forests; 2), the ecology and management of riparian zones; and 3), the ecology and management of special interest species. By 2000, these areas of interest led to the development of three integrated projects: 1), biotic responses to changes in stand structure; 2), production and function of large wood in the riparian zone; and 3), effects of landscape pattern and composition on species.

Two good sources of current information on the CFER program are the CFER Annual Report for 2001, and the CFER web site at: www.fsl.orst.edu/cfer. The annual report lists twenty-one ongoing research projects in western Oregon, and the Salem District has study sites for eight of them: 1), old-growth stand development; 2), bird response to thinning; 3), monitoring avian response to density management; 4), large woody debris production and input; 5), environmental controls on woody plant diversity in western Oregon riparian forests; 6), effects of beaver on plant diversity; 7), effects of landscape patterns on fish distribution; and 8), influence of forest management on headwater stream amphibians at multiple spatial scales. Taken together, these CFER projects will significantly aid the BLM in meeting the requirements for both effectiveness and validation monitoring identified in the NFP.

Several key outdoor education programs continued to be implemented. Programs are operated cooperatively with non-profit educational organizations, schools, colleges, and other organized groups. One of the most successful cooperative partnerships is the science-based and award-winning Cascade Streamwatch program operated in coordination with Wolftree, Inc. and the Forest Service since 1994 at the Wildwood Recreation Site along the Salmon Wild and Scenic River. Wolftree, Inc. has served over 14,000 students since that time at Wildwood and Salem District environmental education sites at Aquila Vista (Molalla River) and Larch Mountain (Buck Creek). In the 2001 fall term, Wolftree led 23 classes and 618 students at the Wildwood and Larch Mountain sites.

Other partners in cooperation with BLM utilize the Molalla River, Sandy River, Wilhoit Springs and numerous other locations for outdoor education. Yaquina Head hosted 9000 elementary, middle and high school students for school based tide pool and marine natural history field activities. A partnership with the Tillamook County Education Consortium has resulted in a very successful outdoor education program in the Nestucca watershed. Programs there include college research (Oregon State University, University of Oregon, and Reed college) as well as elementary, middle and high school outdoor education field activities and site monitoring programs.

Salem District presented 121 environmental education programs to 2327 students ranging from

kindergarten through college in classrooms, at outdoor school events and in other school based settings.

The Salem District presented information at a number of other large public events including Benton, Polk and Clackamas county fairs, Salmon Festival (Sandy River), Song Bird Festival (Salmon River), and the Oregon State Fair. Salem District developed the primary displays and provided the majority of the staffing at the State Fair. Attendance at the BLM Log Cabin was estimated at 44,000 visitors.

INFORMATION RESOURCE MANAGEMENT

The ability to accomplish very complex management of diverse resources requires the ability to access large amounts of data and to apply complicated processing to that data. The goal of the Salem District is to provide its professionals access to that data and the tools needed to process it.

The BLM in western Oregon made a substantial investment in building a Geographic Information System (GIS) as it developed Resource Management Plans (RMPs). This information system has allowed the BLM to organize and standardize basic resource data across the western Oregon districts. GIS has now become a daily tool in resource management that allows display and analysis of complex resource issues in an efficient manner. The Salem District is actively updating and enhancing resource data as conditions change and further field information is gathered.
The Salem District continued to gather data needed to perform required analyses. It has continued to maintain current data in existing databases while also seeking to gather new data. The biggest workload in new data collection continued to be densification of a hydrology GIS theme. This work is important to more accurately determine the location of streams and other water sources. There were also Increased workloads populating a new database, the Integrated Species Management System (ISMS), which tracks Survey & Manage Species over the Northwest Forest Plan area.

CADASTRAL SURVEY

Cadastral survey is an essential function in accomplishment of resource management plan objectives. In the Salem District cadastral survey crews completed 23 projects ranging from 3 mile projects to 24 miles projects. In total, 72 miles were surveyed and 68 monuments set. Six projects were administrative surveys (Cadastral surveys that were done in the 1940's to 1970's and lines were not marked very well because of the small timber). One project for a road easement was an administrative survey for realty. Many were done on a share-cost basis with adjacent landowners. Also there is a bartering program that allows the adjacent landowner to have a percentage of the work done by private surveyors (4 projects consisting of 2 miles) and is subtracted from the total share-cost. Timber companies contributed approximately $42,000 for surveys as a part a cost sharing program.

In addition to normal survey work, technical expertise in geographic positioning system (GPS) technology was preformed on all the cadastral surveys, which will help the geographic information system (GIS) land line inventory applications. Also a crew was detailed for two months to the

Montana State Office Cadastral Section to help with identifying Indian allotments for BIA on the Blackfeet Indian Reservation.

LAW ENFORCEMENT

The Salem District's law enforcement program addresses the public safety and resource protection issues involved with the management of public lands in northwest Oregon. The Salem District has the state's greatest population concentration and the largest urban use of public lands. The program has two rangers (District Ranger and Tillamook Field Office) and one vacancy. The Salem District has Law Enforcement Agreements (LEA) with two of the 13 counties (Clackamas and Yamhill) within the district. These LEAs provide extra law enforcement efforts within problem/ high use areas.

Law Enforcement incidents responded to include: assault, special forest product thefts, resource damage, trash and automobile dumping, controlled substance crimes (drug lab dumps, marijuana growing), and recreation related problems (overtime camps, campground rule violations).

RESOURCE MANAGEMENT PLAN (RMP) MAINTENANCE - 2001

The Salem District Resource Management Plan and Record of Decision (ROD/RMP) was approved in May 1995. Since then, Salem-BLM has been implementing the plan across the entire spectrum of resources and land use allocations. As the plan is implemented, it has become necessary to make minor changes, refinements, or clarifications of the plan. These actions are called "plan maintenance". They do not result in expansion of the scope of resource uses or restrictions or changes in the terms, conditions, and decisions of the approved ROD/RMP. Plan maintenance does not require environmental analysis, formal public involvement, or interagency coordination. Plan maintenance was published in the previous Annual Program Summaries.

2001 AMENDMENT TO THE NORTHWEST FOREST PLAN

The Survey and Manage mitigation in the Northwest Forest Plan was amended in January 2001 through the signing of the Record of Decision (ROD) for the *"Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines."* The intent of the amendment was to incorporate up-to-date science into management of Survey and Manage species and to utilize the agencies' limited resources more efficiently. The ROD provides approximately the same level of protection intended in the Northwest Forest Plan but eliminates inconsistent and redundant direction and establishes a process for adding or removing species when new information becomes available.

The ROD reduced the number of species requiring the Survey and Manage mitigation, dropping 72 species in all or part of their range. The remaining species were then placed into six different management categories, based on their relative rarity, whether surveys can be easily conducted, and whether there is uncertainty as to their need to be included in this mitigation. The following table shows a break down of the placement of these 346 species, and a brief description of management actions required for each.

Table 26 - Categories of Survey and Manage Species

Redefine Categories Based on Species Characteristics			
Relative Rarity	Pre-Disturbance Surveys Practical	Pre-Disturbance Surveys Not Practical	Status Undetermined Pre-disturbance Surveys Not Practical
Rare	Category A - 57 species • Manage All Known Sites • Pre-Disturbance Surveys • Strategic Surveys	Category B - 222 species • Manage All Known Sites • N/A • Strategic Surveys	Category E - 22 species • Manage All Known Sites • N/A • Strategic Surveys
Uncommon	Category C - 10 species • Manage High-Priority Sites • Pre-Disturbance Surveys • Strategic Surveys	Category D - 14 species 1 • Manage High-Priority Sites • N/A • Strategic Surveys	Category F - 21 species • N/A • N/A • Strategic Surveys

1 Includes three species for which pre-disturbance surveys are not necessary

The ROD identifies species management direction for each of the above categories. Uncommon species categories C and D require the management of "high priority" sites only, while category F requires no known site management. The new Standards and Guidelines also establish an in-depth process for reviewing and evaluating the placement of species into the different management categories. This process allows for adding, removing, or moving species around into various categories, based on the new information acquired through our surveys.

Approval of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines* amended the Standards and Guidelines contained in the Northwest Forest Plan Record of Decision related to Survey and Manage, Protection Buffers, Protect Sites from Grazing, Manage Recreation Areas to Minimize Disturbance to Species, and Provide Additional Protection for Caves, Mines, and Abandoned Wooden Bridges and Building That are Used as Roost Sites for Bats. These standards and guidelines were removed and replaced by the contents of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines*.

Plan Maintenance actions to delete all references to Management Action/Direction for Survey and Manage and Protection Buffer species in the Salem District Resource Management Plan and Appendices and adopt the Standards and Guidelines contained in the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures* are required in response to the Record of Decision.
Copies of the ROD and Final SEIS may be obtained by writing the Regional Ecosystem Office at PO Box 3623, Portland, Oregon 97208, or they can be accessed at http://www.or.blm.gov/nwfpnepa..

PLAN MAINTENANCE FY 2002

Change of RMP Evaluation Interval

The RMP, in the Use of the Completed Plan section, established a three year interval for conducting plan evaluations. The purpose of a plan evaluation is to determine if there is significant new information and or changed circumstance to warrant amendment or revision of the plan. The ecosystem approach of the RMP is based on long term management actions to achieve multiple resource objectives including; habitat development, species protection, and commodity outputs. The relatively short three year cycle has been found to be inappropriate for determining if long term goals and objectives will be met. A five year interval is more appropriate given the resource management actions and decisions identified in the RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative RMP accomplishments. Changes to the RMP continue through appropriate amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM planning regulations as revised in November 2000.

The State Director decision to change the evaluation interval from three years to five years was made on March 2, 2002. The next evaluation of the Salem District RMP will address implementation through September 2003.

IMPLEMENTATION MONITORING REPORT
SALEM DISTRICT
FISCAL YEAR 2001

Introduction

Monitoring is an essential component of natural resource management because it provides information on the relative success of management strategies. This report compiles the results and findings of implementation monitoring of the Salem District Resource Management Plan for fiscal year 2001. It meets the requirements for monitoring and evaluation of resource management plans at appropriate intervals within BLM planning regulations (43 CFR 1610.4-9). This report does not include the monitoring conducted by the Salem District which is identified in activity or project plans. Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC).

The Resource Management Plan directs that the Annual Program Summary (APS) will track the progress of plan implementation, state the findings made through monitoring, specifically address the implementation monitoring questions posed in each section of the Monitoring Plan and serve as a report to the public. The different sections of the APS reflect the different purpose of the document. Information in the APS and Monitoring Report is different and both documents should be reviewed to get a complete picture of District programs and progress. Information in the APS provides information about the progress of plan implementation. Information within the Monitoring report contains monitoring information resulting from an in depth examination of a representative sample of projects within the District.

This report is limited to implementation monitoring of projects on Salem-BLM which were completed during the period from June 30, 2000 to June 30, 2001. A change from a fiscal year was done to facilitate the timing of monitoring and having a sufficient pool of completed projects. While the pool of available units was based on a full year, the number of units available to monitor was fairly low compared to previous years because of numerous budget and legal issues.

As monitoring results are evaluated, the process is expected to be adjusted as needed. Changes may be made in the monitoring process itself to increase clarity, efficiency, and usefulness of monitoring. Other adjustments may be made in district processes and procedures to increase our success in achieving implementation objectives. The goal of management is to have very high compliance with all management action/direction or all standards and guidelines. Failure to achieve 100 percent compliance will result in the evaluation aspect of adaptive management to determine if adjustments are necessary to correct deficiencies.

The monitoring process collects information on a sample basis. Monitoring could be so costly as to be prohibitive if not carefully and reasonably designed. Therefore, it is not necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs are avoided by focusing on key monitoring questions and sampling procedures. The level and intensity of monitoring varies, depending on the sensitivity of the resource or area and the scope of the management activity. Monitoring requirements describe appropriate sampling levels and how the key questions will be answered.

Effectiveness and validation monitoring questions are not addressed in this report. The nature of the questions concerning effectiveness and validation monitoring generally require some maturation of implemented projects and research in order to discern results. Effectiveness and validation monitoring will be conducted as appropriate in subsequent years.

Monitoring Process and Approach

Interdisciplinary teams are formed to complete implementation monitoring. The teams normally include a mixture of Resource Area, District, other agency and public interest group representatives. Resource Area employees are generally assigned to review projects in other Areas.

Several steps are involved in selecting which projects to monitor. Information about each project completed during the year is collected. This determines the total number of projects applicable to a specific land use allocation (for example, late successional reserves) or program (for example, fisheries). From this list projects can be selected to meet the twenty percent monitoring threshold for most monitoring categories. Projects usually apply to more than one category. For example, a timber sale along a stream in an late successional reserve would apply to the twenty percent requirement for timber sales, riparian reserves and late successional reserves. Projects were selected in order to meet the minimum monitoring requirements, to provide useful program information and to efficiently organize the work.

For most projects being reviewed, the team review project files and examine the project in the field. There are up to 69 implementation monitoring questions to be reviewed for each project. Some questions are specific to a land allocation or a type of project, so they do only apply to some projects. As a result, the number of monitoring questions applicable to a project varies. The monitoring team reviews the monitoring questions to determine which ones are applicable to the specific project. The team completes the monitoring questionnaire and submits their report to the local line manager and the District Manager.

A few projects require a less intensive program review to meet monitoring requirements. Environmental assessments and other official records are reviewed to ensure compliance with specific program requirements. Not all monitoring questions are examined. The noxious weed treatment along the Sandy River and the stand maintenance treatment in the Marys Peak Resource Area were monitored in this manner. A listing of the projects monitored in each Resource Area is shown in Table 27.

Detailed information on the monitoring process and monitoring results is available for review in the Salem District Office.

This monitoring process stimulates an exchange of information, ideas and perspectives relating to RMP implementation. We have found that the monitoring process has a significant educational value to District employees and others who participate in the process.

The original implementation monitoring questions were taken directly from Appendix J of the RMP. Over the course of several years, monitoring questions based on the provincial level monitoring were also incorporated and some questions were revised to improve clarity or understanding.

Table 27 - SUMMARY OF PROJECTS MONITORED FY 2001

Project Type	Tillamook R.A.	Marys Peak R.A.	Cascades R.A.	Total Number of Projects
Timber Sales	McClafferty Creek Density Management	Crooked Alder	Good Gawley	3
Silviculture Projects	0	Stand Maintenance	0	1
Riparian Projects	McClafferty Creek, Elk Creek & Bear Ridge Culverts	Crooked Alder, Laurel Creek Road Restoration	Good Gawley, Molalla River Fish Habitat Restoration	6 (includes projects in other categories)
Fish Habitat Projects	0	0	Molalla River Restoration	1
Prescribed Burns	0	Bummer Swamp	0	1
Road Restoration / Bridge Replacement	Elk Creek & Bear Ridge Culverts	Laurel Creek	0	2
Other Projects	0	0	Yellowbottom Recreation site improvements, Sandy River Noxious weeds	2
Total	2	4	4	10 projects, several in more than one category

Monitoring Results and Findings

On an overall basis, there was high compliance with RMP management action/direction noted in fiscal year 2001 monitoring. There were no discrepancies or inconsequential discrepancies noted in most land use allocations and programs. This generalization, in order to be fully understood, requires a more in depth examination of the implementation monitoring questions and monitoring results.

There were 201 applicable monitoring questions for the ten monitored projects. Responses to193 of the monitoring questions (96%) indicated that RMP standards and guides were met. Eight responses indicated that RMP standards were not met. Six of the eight 'does not meet' responses were for a fish restoration project and improvements at a recreation site. 98% of the monitoring questions applicable to timber sales showed that RMP standards and guides were met (91 of 93 questions). A summary of the monitoring results is shown in Table 28.

The single discrepancy associated with the McClafferty Creek timber sale resulted from a riparian reserve which was found to be inconsistent with the decision record. The discrepancy associated with the Good Gawley timber sale was associated with the lack of the appropriate level of discussion of how the project met Aquatic Conservation Objectives. The monitoring team examined the completed project's riparian reserves. Riparian reserves were found to be protected. "Overall, the team thought that this project was well designed and implemented."

Discrepancies associated with Molalla River fish habitat restoration project were associated with the lack of a cultural clearance and survey & manage surveys. The implemented practices were

different than called for in the Biologic Opinion. There were no or very minimal adverse effects to the resources as a result of these discrepancies. In the Yellowbottom Recreation Site improvements discrepancies were caused by changes to planned actions. As a result, work occurred in northern spotted owl habitat without consultation. There were no or very minimal adverse effects to the resources as a result of these discrepancies. The area was surveyed for owls after completion of the project. Nesting was apparently not adversely affected by the increased noise levels since there were fledglings from the nesting pair in the vicinity of the project.

Discrepancies regarding projected timber sales were noted in the Annual Program Summary with other reports of programs. resources. Activities in 19 of 20 land use allocations and resource programs identified for monitoring in the plan were found to be in full compliance with management action/direction.

Table 28 - Summary of Fiscal Year Salem District Implementation Monitoring Results

Project	Number of Applicable Monitoring Questions	Met Requirements	Did Not Meet Requirements
Crooked Alder timber sale	30	30	0
Marys Peak stand maintenance	1	1	0
Bummer Swamp prescribed burn	26	26	0
Laurel Creek road improvements	26	26	0
McClafferty Creek density management timber sale	30	29	1
Elk Creek & Bear Ridge culvert replacements	18	18	0
Good Gawley timber sale	33	32	1
Molalla River fish habitat restoration	22	18	4
Sandy River noxious weeds	1	1	0
Yellowbottom Recreation Site improvements	14	12	2
Total	201	193	8

Recommendations Relating to Project Implementation and Monitoring

Additional maintenance, protection and/or restoration of the relevant and important values is needed for some special areas. Additional actions to correct the problems identified through monitoring are planned at Grass Mountain ACEC and Sandy River Gorge ACEC.

CWD is normally the hardest wildlife habitat component to meet. When adequate downed material is not available, some existing felled trees have to be left on the ground or additional standing trees need to be reserved to be felled or blown down by future storms.

Aquatic resource specialist recommended that burning in riparian reserve be considered during project planning and addressed in silvicultural prescriptions. Currently, riparian reserves are typically protected from burn activities. The reserves may actually benefit from burns in certain situations.

Better communication of project decision requirements is needed in to ensure appropriate implementation of project requirements, such as riparian reserve widths. Make sure both the project lead and contract preparer get a copy of NEPA documentation and discuss the project prior to preparation of the contract.

Ensure all appropriate specialists included on review and approval forms for projects.

Future stream and riparian enhancement projects should consider adopting similar methods of pulling whole trees into the stream channels. However, consideration should be given to using multiple trees in a single area to create complex jams rather than scattering single trees.

Add a standard noise reduction statement for work occurring in LSRs to all NEPA documents.

Continue to use mixed, interdisciplinary teams from Resource Areas and District staff to conduct implementation monitoring.

Review monitoring questions to remove potential duplication and ensure full coverage of monitoring topics.

Conclusions

Analysis of the fiscal year 2001 monitoring results concludes that overall the Salem District had high compliance with management action/direction, and no major changes in management direction or Resource Management Plan implementation is warranted at this time. Of the many discrete actions that were reviewed through the implementation monitoring questions, few discrepancies were found.

All Land Use Allocations

Expected Future Conditions and Outputs

Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Monitoring Question 1

Are management actions for the four components of species listed in Appendix H, Table H-1 (Survey and Manage) being implemented as required?

Monitoring Requirement

At least twenty percent of all management actions will be examined prior to project initiation and re-examined following project completion.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

Surveys were completed, recorded and mitigating measures were implemented for Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, and the Bummer Swamp #1 prescribed burn. The standard did not apply to the Laurel Creek road restoration and the Elk Creek and Bear Ridge culvert replacement projects as there was no applicable habitat for the species .

Surveys were not done prior to the Molalla fish restoration project and no mitigation measures were implemented.

A total of approximately 18,900 acres of pre-project botanical surveys were conducted during fiscal year 2001: 5,800 acres for fungi and 4,400 acres for lichens, bryophytes, and vascular plants.

Conclusion

In all but one instance (the Molalla fish restoration project), the required surveys and management actions for the four components of species listed in Appendix H, Table H-1 (Survey and Manage) were implemented. In the one instance where surveys were not done, adverse impacts to survey and manage species should be very small and inconsequential (see explanation below).

Comment/Discussion

In the Molalla fish restoration project, intact trees with roots attached were winched into the Molalla River as a fish habitat enhancement measure. No trees or other materials were removed from the area. Trees which were placed in the stream were 16 -13 inches in diameter and were selected from riparian conifer stands dense enough that allowed retention of canopy closure and stream shading. Adverse impacts to survey and manage species due to the lack of surveys or mitigating measures should be very small and inconsequential.

Monitoring Question 2

Are management actions for protection buffers species listed in Appendix H, Table H-2 being implemented as required?

Monitoring Requirement

At least twenty percent of all management actions will be examined prior to project initiation and re-examined following project completion.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

Surveys were completed, recorded and mitigating measures were implemented for Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, and the Bummer Swamp #1 prescribed burn. The standard did not apply to the Laurel Creek road restoration and the Elk Creek and Bear Ridge culvert replacement projects as there was no applicable habitat for the species .

Surveys were not done prior to the Molalla fish restoration project and no mitigation measures were implemented.

Conclusion

In all but one instance (the Molalla fish restoration project), the required surveys and management actions for the four components of species listed in Appendix H, Table H-1 (Survey and Manage) were implemented. In the one instance where surveys were not done, adverse impacts to survey and manage species should be very small and inconsequential (see explanation below).

Comment/Discussion

In the Molalla fish restoration project, intact trees with roots attached were winched into the Molalla River as a fish habitat enhancement measure. No trees or other materials were removed from the area. Trees which were placed in the stream were 16 -13 inches in diameter and were selected from riparian conifer stands dense enough that allowed retention of canopy closure and stream shading. Adverse impacts to survey and manage species due to the lack of surveys or mitigating measures should be very small and inconsequential.

Riparian Reserves

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.
Provision of habitat for special status and SEIS special attention species.

Implementation Monitoring

Monitoring Question 1

Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?

Monitoring Requirement

At least twenty percent of all management actions will be examined to ensure that watershed analyses were completed prior to project initiation.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

The Watershed analysis had been completed prior to planning and implementation of all monitored projects.

Conclusion

RMP requirements were fully met.

Monitoring Question 2

Is the width and integrity of the Riparian Reserves established according to RMP management direction?

Monitoring Requirement

At least twenty percent of management activities within each resource area will be examined prior to project initiation and re-examined following project completion, to determine whether the width and integrity of the Riparian Reserves were maintained.

Monitoring Performed

Twelve projects were implemented in riparian reserves in fiscal year 2001. Timber Management areas which included or were adjacent to riparian reserves were Roaring Crabs regeneration harvest, Slippery Moose regeneration harvest, Good Gawley regeneration harvest, Crooked Alder Density Management and McLafferty Creek Density Management. The McLafferty Creek, Crooked Alder and Good Gawley projects were included in the 2001 implementation monitoring.

Monitoring of riparian reserves involves checking that streams have been identified in the management area and that the riparian reserves as identified in the environmental assessment have been implemented in these locations.

Findings

Monitoring recorded a continuing trend of good compliance with stream marking and identification throughout all units monitored. The implemented riparian widths were found to comply with the environmental assessments and be the appropriate width, except for the McLafferty Creek density management treatment. During field review of the McClafferty Creek project the monitoring team found approximately 200 to 250 lineal feet of the northwest portion of the no-cut buffer of McClafferty Creek that were from 35 feet to 60 feet wide. The McClafferty Creek decision record called for a 100 foot buffer along McClafferty Creek. The narrow riparian reserve continued until a point in the creek where two tributaries came together. At this point, the buffer widened to approximately 90-100 feet.

Conclusion

Generally, RMP riparian reserves have been established according to RMP management direction. The McClafferty Creek decision record called for a 100 foot buffer would be provided for McClafferty Creek. However, implementation was not consistent with the decision. The no cut buffer should have been posted at 100 foot rather than at 35 feet.

Comment/Discussion

Better communication of project decision requirements is needed in to ensure appropriate implementation of riparian reserve widths.

Future stream and riparian enhancement projects should consider adopting similar methods of pulling whole trees into the stream channels. However, consideration should be given to using multiple trees in a single area to create complex jams rather than scattering single trees.

Monitoring Question 3

Are management activities in Riparian Reserves consistent with the SEIS Record of Decision Standards and Guidelines and RMP management direction?

Monitoring Requirement

At least twenty percent of the activities that are conducted or authorized within Riparian Reserves will be reviewed in order to identify whether the actions were consistent with the SEIS record of decision Standards and Guidelines, resource management plan management direction and Aquatic Conservation Strategy objectives.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

As previously mentioned, the McClafferty Creek project had timber management activities inconsistent with the decision record along a portion of the no-cut buffer of McClafferty Creek.

The projects with the greatest potential for disturbing conditions in riparian reserves involved road restoration and road construction. The Bear Ridge / Elk Creek culvert replacements, (located in the Nestucca watershed of the Tillamook Resource Area) and the Molalla River fish enhancement project were monitored.

Conclusion

Other than the previously mentioned McClafferty Creek density management project, management activities in riparian reserves were consistent with SEIS Record of Decision Standards and Guidelines and RMP management direction. The Molalla fish restoration project met ACS objectives. It provided habitat complexity, dissipated flood flows and retained gravels.

Comment/Discussion

None.

Monitoring Question 4

Are new structures and improvements in Riparian Reserves constructed to minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations and accommodate the 100-year flood?

Monitoring Requirement

All new structures and improvements within a Riparian Reserve will be monitored during and after construction to ensure that it was constructed to: minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations and accommodate the 100-year flood.

Monitoring Performed

The Bear Ridge / Elk Creek culvert replacements, located in the Nestucca watershed of the Tillamook Resource Area was monitored. The project provided down spouts and outflow armoring to avoid erosion and sediment to the system.

Fish habitat projects were conducted in the Nehalem and Mollalla drainages. A culvert was replaced, providing fish passage in the Upper Nehalem watershed. Large woody debris in the form of whole trees were introduced into the Upper Mollalla River mainstem to provide habitat complexity, dissipation of flood flows and retention of bedload. A riparian enhancement project consisting of brush control of planted conifers was completed in the Cascade Resource area in 2001.

Findings

Overall, these projects were found to be successful in restoring drainage and providing crossings that will function during storm events. The Laurel Creek culverts were designed to accommodate bedload and fish passage while taking extra effort to align with the channel direction.

Conclusion

Management activities in riparian reserves were consistent with SEIS Record of Decision Standards and Guidelines and RMP management direction.

Monitoring Question 5

(A) Are all mining structures, support facilities and roads located outside the Riparian Reserves? (B) Are those located within the Riparian Reserves meeting the objectives of the Aquatic Conservation Strategy? (C) Are all solid and sanitary waste facilities excluded from Riparian Reserves or located, monitored and reclaimed in accordance with SEIS record of decision Standards and Guidelines and resource management plan management direction?

Monitoring Requirement

All approved mining Plans of Operations will be reviewed to determine if regulatory and RMP requirements were met.

Monitoring Performed

Program review.

Findings

No Plans of Operations for projects were filed or monitored during fiscal year 2001.

Conclusion

RMP objectives were met.

Late-Successional Reserves

Expected Future Conditions and Outputs

Development and maintenance of a functional, interacting, late-successional and old-growth forest ecosystem in Late-Successional Reserves.

Protection and enhancement of habitat for late-successional and old-growth forest-related species including the northern spotted owl and marbled murrelet.

Implementation Monitoring

Monitoring Question 1

Where activities conducted or authorized within Late Successional Reserves consistent with SEIS Record of Decision Standards and Guidelines, resource management plan management direction, Regional Ecosystem Office review requirements and the Late-Successional Reserve assessment?

Monitoring Requirement

At least 20 percent of the activities that are authorized or conducted within Late-Successional Reserves will be reviewed in order to determine whether the actions were consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction and Regional Ecosystem Office review guidelines.

Monitoring Performed

Projects monitored included; Crooked Alder Timber Sale unit #1, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

The Crooked Alder timber sale was designed within LSR assessment guidelines. No trees were cut in conjunction with the Bear Ridge culvert project. All activities were conducted within existing rights of way. Trees were cut to facilitate construction associated with the Laural Creek Road project. They were retained for future stream enhancement or coarse woody debris projects.

Conclusion

During fiscal year 2001, all habitat manipulation activities in LSRs were covered by full LSR assessments completed in accordance with SEIS Record of Decision Standards and Guidelines, resource management plan management direction, Regional Ecosystem Office review requirements and the Late-Successional Reserve assessment

Matrix

Expected Future Conditions and Outputs

Production of a stable supply of timber and other forest commodities.

Maintenance of important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as down logs, snags, and large trees.

Assurance that forests in the Matrix provide for connectivity between Late-Successional Reserves.

Provision of habitat for a variety of organisms associated with early and late-successional forests.

Implementation Monitoring

Monitoring Question 1

Are late-successional stands being retained in fifth-field watersheds in which federal forest lands have 15 percent or less late-successional forest?

Monitoring Requirement

At least twenty percent of the files on each year's timber sales will be reviewed annually to determine if ecosystem goals were addressed in the silvicultural prescriptions.

Monitoring Performed

Program review. Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, and McClafferty Creek density management.

Findings

NEPA documents and referenced files document that all watersheds with monitored timber sales have at least 15% or more late successional forest. None of the timber sales reduced late successional forest to levels below 15%.

Conclusion

RMP objectives have been met.

Monitoring Question 2

Is 25-30 percent of each Connectivity/Diversity block maintained in late-successional forest conditions as directed RMP management action and direction?

Monitoring Requirement

At least 20 percent of the files involving each year's timber sales in Connectivity/Diversity blocks will be reviewed to determine that they meet this requirement.

Monitoring Performed

A review of timber sale records determined that no connectivity timber sales were completed during the monitoring period. The Slippery Moose timber sale was harvested, but did not have its prescribed burn completed during the monitoring period. The Stetcher timber sale was sold in fiscal year 2000 and the Fawn Creek timber sale was sold in fiscal year 2001. These sales will be candidates for monitoring in following years.

Findings

Approximately 90 wildlife trees were created in the Slippery Moose timber sale area within the connectivity land use allocation.

Conclusion

RMP objectives are being met.

Air Quality

Expected Future Conditions and Outputs

Attainment of National Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and Oregon visibility protection plan and smoke management plan goals.

Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the state implementation plan.

Implementation Monitoring

Monitoring Question 1

Were efforts made to minimize the amount of particulate emissions from prescribed burns?

Monitoring Requirement

Each year at least twenty percent of prescribed burn projects will be randomly selected for monitoring to assess what efforts were made to minimize particulate emissions, and whether the environmental analysis that preceded the decision to burn addressed the questions set forth in the SEIS discussion of Emission Monitoring.

Monitoring Performed

The Bummer Swamp #1 prescribed burn was monitored.

Findings

Burning occurred during three days which sere scattered over several months. Piles were burned October 2000 and broadcast burning occurred May 29, 2001 and June 1, 2001. There was a slow ignition for the broadcast burning due to sensitivity to scattered green retention trees, nearby power lines, and adjacent highway and small reserve areas within the harvest unit. These factors all contributed to minimizing particulate emissions as well as achieving other resource objectives.

Air quality was addressed in the EA with project design features incorporated to achieve air quality and other objectives (water quality, retention of coarse woody debris and snags, etc.).

Conclusion

RMP requirements were met.

Comment/Discussion

Experienced prescribed fire managers are writing burn plans, and then implementing those plans when good smoke mixing and dispersal exist. Significant reductions in acres being burned and prompt mop-up of burned units has also helped to reduce residual smoke.

Aquatic resource specialist recommended that burning in riparian reserve be considered during project planning and addressed in silvicultural prescriptions. Currently, riparian reserves are typically protected from burn activities. The reserves may actually benefit from burns in certain situations.

Monitoring Question 2

Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities?

Monitoring Requirement

Each year at least twenty percent of the construction activities and commodity hauling activities will be monitored to determine if dust abatement measures were implemented.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

Dust abatement was not required for the Good Gawley and Crooked Alder timber sales. Log hauling occurred during April through October 2001. No palliative was considered necessary. Dust abatement was not required on the Laurel Creek or the Elk Creek and Bear Ridge culvert projects.

Conclusion

RMP objectives were met.

Water and Soils

Expected Future Conditions and Outputs

Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy Objectives.

Compliance with state water quality requirements to restore and maintain water quality to protect recognized beneficial uses.

Improvement and/or maintenance of soil productivity.

Reduction of existing road mileage within Key Watersheds.

Implementation Monitoring

Monitoring Question 1

Are site-specific best management practices, identified as applicable during interdisciplinary review, carried forward into project design and execution?

Monitoring Requirement

Each year at least twenty percent of the timber sales and other relevant actions stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed.

Monitoring Performed

Nine separate project actions were monitored for BMP implementation and beneficial use identification. Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, spraying at Horning Seed Orchard and the Elk Creek and Bear Ridge culvert replacement.

Findings

In eight of the projects monitored, the appropriate BMP's were designed to avoid or mitigate potential impacts to beneficial uses identified. The Yellowbottom water system upgrade did not identify any BMP's as the action had no impact to water resources. Most of the assessments had documented complete disclosure of downstream beneficial use. All BMP's identified in project documentation were found to be implemented on the ground.

The pesticide spray project at the Horning Seed Orchard was monitored for effectiveness of BMP's to avoid spray drift and runoff from entering streams draining the orchard. Water quality monitoring results showed that BMP's were very effective in avoiding runoff from the orchard fields during the spring and winter of 2001. Drift monitoring showed that 24 hour concentrations of esfenvalerate were detectible but far below the levels which are known to affect salmonids. Recommendations for modification of flight paths are being incorporated into future design features to minimize any drift.

Conclusion

RMP objectives were met.

Comment/Discussion

Clean Water Act Monitoring was accomplished through partnership with ODEQ and local Watershed Councils. The BLM monitoring targeted collection of information on Salem District administered lands in the North Santiam and Clackamas sub-basins as per the Forest Service and Bureau of Land Management protocol for addressing Clean Water Act Section 303d Listed Waters (May 1999, version 2). Continuous water temperature, low flow measurements, riparian and channel data were collected on 16 sites in these focus areas to prepare for starting the Water Quality Management Planning process.

Identification of total maximum daily loads (TMDLS) and and completion of a Water Quality Management Plan (WQMP) are due for these sub-basins by 2003. During FY2001 Salem BLM funded four USGS continuous recording stream gauge stations which occur in 303d listed sub-basins. This data and hydrologist expertise has been shared with watershed councils in an effort to cooperate with the Governor's Plan and develop watershed-based plans.

Monitoring Question 2

What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in Key Watersheds?

Monitoring Requirement

Compliance checks will be completed for all agreements entered into with providers of municipal water.

Monitoring Performed

No timber sale units within key watersheds were completed during fiscal year 2001. Other projects completed included: two stand maintenance projects, one culvert installation and trapping and tubing to reduce tree losses to animals. A review of program files indicated that watershed analyses had been completed in these areas.

Two projects occurred in the Upper Mollalla municipal watershed: the Molalla fish habitat project and the Good Gawley regeneration harvest timber sale.

Findings

Both the Molalla fish habitat project and the Good Gawley regeneration harvest timber sale were completed consistent with the recommendations of the watershed analysis. The projects implemented the standards and guides of the NFP and therefore met the Memorandum of Agreement with the water providers.

Conclusion

RMP objectives were met.

Comment/Discussion

A summary of Watershed Analysis completed and in progress is included in the main section of the Annual Program Summary.

Wildlife Habitat

Expected Future Conditions and Outputs

Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations.

Implementation Monitoring

Monitoring Question 1

Are suitable (diameter, length, and numbers) of snags, coarse woody debris and green trees being left, in a manner that meets the needs of species and provides for ecological functions in harvested areas as called for in the SEIS record of decision Standards and Guidelines and resource management plan management direction?

Monitoring Requirement

Each year at least twenty percent of regeneration harvest timber sales in each resource area will be selected for examination by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, and McClafferty Creek density management.

Findings

In fiscal year 2001, one timber sale (Good Gawley) was monitored in matrix lands. It had adequate numbers of green trees (six to eight per acre) retained after harvest. This finding is consistent with previous years' monitoring.

In the relatively young Crooked Alder timber sale, only smaller 6 foot to 14 foot snags existed in the stand prior to harvest. In addition, 68% of the pre-sale survey plots had no snags. Due to the logging requirements and safety concerns many of the existing, small snags were cut. All down wood was retained on the site through a specific contract reservation clause. Approximately 36 large (>20" dbh) hard trees were on the ground following harvest.

The McClafferty Creek density management project met requirements for snags, retained green trees and coarse woody debris.

Salem-BLM created snags on 1,089 acres. The green trees reserved for snags are above the number reserved for green tree retention or future coarse woody debris. High quality snags are protected by surrounding them with reserve patches.

Conclusion

Suitable numbers of snags, coarse woody debris and green trees were left, in a manner as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction. RMP objectives were being met.

Comment/Discussion

All harvest operations had been completed on the monitored projects.

CWD is the hardest wildlife habitat component to meet. When adequate downed material is not available, some existing felled trees have to be left on the ground or additional standing trees need to be reserved to be felled or blown down by future storms. During the past fiscal year, Salem treated 506 acres to create CWD.

Monitoring Question 2

Are special habitats being identified and protected?

Monitoring Requirement

Each year at least twenty percent of BLM actions, within each resource area, on lands including or near special habitats will be examined to determine whether special habitats were protected.

Monitoring Performed

All projects monitored were reviewed to determine if they included or were near special habitats. Those projects included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

No projects addressing special habitats were identified during fiscal year 2001.

Conclusion

RMP objectives were met.

Fish Habitat

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.

Maintenance or enhancement of the fisheries potential of streams and other waters, consistent with BLM's Anadromous Fish Habitat Management on Public Lands guidance, BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.

Rehabilitation and protection of at-risk fish stocks and their habitat.

Implementation Monitoring

Monitoring Question 1

Are fish habitat restoration and enhancement activities being designed and implemented which contribute to attainment of Aquatic Conservation Strategy objectives?

Monitoring Requirement

The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.

Monitoring Performed

The Molalla River anadromous fish restoration project was monitored.

Findings

ACS objectives were considered, documented in analysis and incorporated into project design and implementation.

Conclusion

RMP objectives for meeting ACS objectives were met.

Monitoring Question 2

Are potential adverse impacts to fish habitat and fish stocks being identified?

Monitoring Requirement

At least twenty percent of the files on each year's timber sales, and other relevant actions, will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and SEIS record of decision Standards and Guidelines and resource management plan management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

Environmental assessments and Biologic Opinions were completed for all timber sales. Special design features were incorporated to eliminate or reduce impacts to fish. Design features for the Crooked Alder timber sale included one end suspension of logs, seasonal yarding, retention of larger trees, haul rout maintenance and installation of a culvert.

The Molalla fish project was implemented consistent with the Programmatic Biologic Opinion. In addition, separate consultation was also done. The BA contained measures restricting instream activities to particular seasons and criteria for selecting trees.

The Bear Creek and Elk Ridge road project had culvert outlets armored to dissipate the velocity of flow and reduce scour and sedimentation. These and other design features were incorporated into the project even though the project did not directly affect any fish bearing streams.

Conclusion

RMP objectives were met.

Special Status and SEIS Special Attention Species and Habitat

Expected Future Conditions and Outputs

Protection, management and conservation of federally listed and proposed species and their habitats, to achieve their recovery in compliance with the Endangered Species Act and bureau special status species policies.

Conservation of federal candidate and bureau sensitive species and their habitats so as not to contribute to the need to list and recover the species.

Conservation of state-listed species and their habitats to assist the state in achieving management objectives.

Maintenance or restoration of community structure, species composition, and ecological processes of special status plant and animal habitat.

Protection of bureau assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Monitoring Question 1

Are special status species being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb special status species, are steps taken to adequately mitigate disturbances?

Monitoring Requirement

Each year at least twenty percent of all management actions will be selected for examination to evaluate documentation regarding special status species and related recommendations and decisions in light of Endangered Species Act requirements, policy and SEIS record of decision Standards and Guidelines and resource management plan management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

Special status species surveys were completed in conjunction with project design and implementation. Generally, they were not found in the project area or did not affect the project. The most common mitigating measure implemented for special status species was seasonal restrictions.

Surveys for Special Status (SS) and Special Attention (SA) plant species (see glossary) were completed prior to all ground disturbing activities. Roughly 4,400 acres of pre-project surveys for Special Status plant species were conducted during fiscal year 2001, bringing the total from 1996 through 2001 to 36,200 acres.

Conclusion

RMP objectives were met.

Monitoring Question 2

Do management actions comply with plans to recover threatened and endangered species?

Monitoring Requirement

Review recovery plans for threatened and endangered species to ascertain if management actions were consistent with plans to recover species.

Monitoring Performed

Programs and activities were assessed for compliance with recovery plans. Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

In fiscal year 2001, interagency teams continued using the Section 7 consultation streamlining process. Level one teams, consisting of local employees from BLM, FS, and FWS, regularly met to accomplish consultations. Three wildlife programmatic consultation packages, prepared for fiscal year 2001, were implemented for wildlife. One consultation package for disturbance was completed for the Willamette Province. A consultation package for disturbance and one for habitat modification were completed for the North Coast Province. This helped avoid numerous redundant consultation efforts for normal, repetitive actions. In addition, 5 other consultations for terrestrial wildlife were conducted for activities outside the scope of the programmatic activities. The biological opinions received from FWS were then used in project planning for fiscal year 2001 and beyond.

Endangered Species Act consultation for anadromous fish was completed for five timber sales and the Horning Seed Orchard spray project in fiscal year 2001.

Design features for timber sales were found to be consistent with criteria included in the BA/BO. Design criteria normally included seasonal restrictions, reserve trees suitable for nesting, timing of in water work, stabilizing potential erosion areas, minimizing the number of access points, and spill containment plans. Some projects, such as the Good Gawley timber sale, took place prior to the ESA listings of fish.

One project, the Yellowbottom Recreation site water system upgrade, did not met objectives for protection of ESA listed species (northern spotted owl). The recreation site is sithin an LSR and near an existing nest. At the time the categorical exclusion (CX) was done for the project, it was expected that the work would take place prior to the nesting season (beginning March 1). Consultation did not take place for this project because the activity was expected to take place outside of the nesting season. Due to delays and changes in the work requirements, the work took place during the nesting season. There was a higher noise disturbance than documented in the CX.

Conclusion

In all but one instance (the Yellowbottom recreation site water system upgrade), the required consultation and management actions for ESA listed species were implemented. In the one instance where consultation was not done, adverse impacts to the northern spotted owl seemed to be very small and inconsequential (see explanation below).

Comment/Discussion

The area near Yellowbottom recreation site was surveyed for owls after completion of the project. There were fledglings from the nesting pairs in the vicinity of the project. Apparently, nesting was not adversely affected by the increased noise levels.

Special Areas

Expected Future Conditions and Outputs

Maintenance, protection and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern (ACEC), Outstanding Natural Areas, Research Natural Areas, and Environmental Education Areas.

Provision of recreation uses and environmental education in outstanding natural areas. Management of uses to prevent damage to those values that make the area outstanding.

Preservation, protection or restoration of native species composition and ecological processes of biological communities in research natural areas.

Provision and maintenance of environmental education opportunities in environmental education areas. Management of uses to minimize disturbances of educational values.

Retention of existing research natural areas and existing areas of critical environmental concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

Implementation Monitoring

Monitoring Question 1

Are BLM actions and BLM-authorized actions/uses near or within special areas consistent with resource management plan objectives and management direction for special areas?

Monitoring Requirement

Annually, the files on all actions and research proposals within and adjacent to special areas will be reviewed to determine whether the possibility of impacts on area of critical environmental concern values was considered, and whether any mitigation identified as important for maintenance of area of critical environmental concern values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

Monitoring Performed

Monitoring was completed on sixteen existing ACECs.

Findings

Current management was determined to be effective in protecting the values for most of these special areas. Road maintenance or closure was identified as a need for many of the Marys Peak Resource Area's ACECs. Special forest products theft and off road vehicle use was found to be causing excessive resource damage at the Grass Mountain ACEC. The road leading to Grass Mountain ACEC is scheduled to be closed in fiscal year 2002.

Infestations of invasive exotic plant species threaten riparian habitats in the Sandy River Gorge ACEC and adjacent ownerships. Challenge Cost Share funding has allowed the BLM to be included in a large partnership, led by The Nature Conservancy to control and eradicate infestations of Japanese knotweed and other invasive exotics along the Sandy River.

Conclusion

BLM actions and BLM-authorized actions/uses near or within special areas are consistent with RMP objectives and management direction for special areas. However, management objectives and resource values on some special areas are at risk of being lost.

Comment/Discussion

Additional maintenance, protection and/or restoration of the relevant and important values is needed for some special areas. Additional actions to correct the problems identified through monitoring are planned at Grass Mountain ACEC and Sandy River Gorge ACEC.

Cultural Resources Including American Indian Values

Expected Future Conditions and Outputs

Identification of cultural resource localities for public, scientific, and cultural heritage purposes.

Conservation and protection of cultural resource values for future generations.

Provision of information on long-term environmental change and past interactions between humans and the environment.

Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

Implementation Monitoring

Monitoring Question 1

Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances? Are surveys for the species listed in appendix B-1 conducted before ground-disturbing activities occur?

Monitoring Requirement

At least twenty percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values and decisions in light of requirements, policy and SEIS record of decision Standards and Guidelines and resource management plan management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed

Projects monitored included; Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

All timber sales had the required cultural reviews prior to implementation.

The Molalla fish restoration project did not have documentation of the required cultural resource reviews. One portion of the project area had the potential to contain cultural resource sites and should have been surveyed.

Conclusion

In all but one instance, cultural resources have been addressed in deciding whether or not to go forward with actions. RMP requirements were met for all timber sales, but not for the Molalla fish restoration project.

Comment/Discussion

The monitoring team for the Molalla fish restoration project recognized that the risk for effects to cultural resources was low, cultural resources is not an identified 'outstandingly remarkable value' for the area and no adverse impacts to cultural resources were found.

Visual Resources

Expected Future Conditions and Outputs

Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for visual resource management class I and II management; partial retention of the existing character on lands allocated for visual resource management class III management and major modification of the existing character of some lands allocated for visual resource management class IV management.

Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

Implementation Monitoring

Monitoring Question 1

Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in class II and III areas?

Monitoring Requirement

Twenty percent of the files for timber sales and other substantial projects in visual resource management class II or III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

Monitoring Performed

These projects were reviewed to determine their potential impacts to visual resources: Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, and the Yellowbottom water system upgrade.

Findings

The Molalla River corridor and the Quartzville River corridor are both within VRM Class II. The Molalla fish restoration project and the Yellowbottom water system improvements were both within these areas. The general management direction for VRM Class II is to retain the existing character of the landscape. The projects did not alter the overall character of the landscape.

Conclusion

RMP objectives were met.

Wild and Scenic Rivers

Expected Future Conditions and Outputs

Protection of the outstandingly remarkable values of designated components of the National Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.

Protection of the outstandingly remarkable values of eligible/suitable wild and scenic rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.

Protection of the natural integrity of river-related values for the maintenance or enhancement of the highest tentative classification determination for rivers found eligible or studied for suitability.

Designation of important and manageable river segments suitable for designation where such designation contributes to the National Wild and Scenic Rivers System.

Implementation Monitoring

Monitoring Question 1

Are BLM actions and BLM-authorized actions consistent with protection of the outstandingly remarkable values of designated, suitable, and eligible but not studied, rivers?

Monitoring Requirement

Annually, the files on all actions and research proposals within and adjacent to wild and scenic river corridors will be reviewed to determine whether the possibility of impacts on the outstandingly remarkable values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

Monitoring Performed

These projects were reviewed to determine their potential impacts to designated and potential wild and scenic rivers: Good Gawley Timber Sale unit #5, Crooked Alder Timber Sale unit #1, McClafferty Creek density management, Bummer Swamp #1 prescribed burn, the Molalla anadromous fish restoration project, the Yellowbottom water system upgrade, the Laurel Creek road restoration, and the Elk Creek and Bear Ridge culvert replacement.

Findings

The Molalla anadromous fish restoration project and the Yellowbottom water system upgrade are both within river corridors. Quartzville Creek is designated as a scenic river and the Molalla River has been identified as suitable for inclusion in the national wild and scenic rivers system. Consideration of outstandingly remarkable values and potential mitigation was documented for both of the projects. Mitigation measures implemented at the Molalla project included placement of the wood in the stream so that the river could also be used as a slalom course for kayakers. By placing wood in the stream it now has a more natural appearance.

Conclusion

RMP objectives requirements were met.

Rural Interface Areas

Expected Future Conditions and Outputs

Consideration of the interests of adjacent and nearby rural land owners, including residents, during analysis, planning and monitoring related to managed rural interface areas. (These interests include personal health and safety, improvements to property, and quality of life.)

Determination of how land owners might be or are affected by activities on BLM-administered lands.

Implementation Monitoring

Monitoring Question 1

Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life and property and quality of life and to minimize the possibility of conflicts between private and federal land management?

Monitoring Requirement

Each year at least twenty percent of all actions within the identified rural interface areas will be selected for examination to determine if special project design features and mitigation measures were included and implemented as planned.

Monitoring Performed

During fiscal year 2001, a few individual units of two stand maintenance and thinning contracts were completed within rural interface areas. The projects were treatments to young forest stands to remove competing vegetation and thin existing trees to stimulate tree growth within the Marys Peak Resource Area. Files for one of these projects were reviewed to ensure that rural interface issues were considered and documented. implemented.

Findings

Categorical exclusions for the forest treatments were examined. These documents identifies which units were within rural interface areas. Given the nature of the proposed projects, no specific mitigating measures were identified or implemented. The projects had minimal to no effect to surrounding properties and residents and no significant conflicts occurred.

Conclusion

RMP objectives were met.

Noxious Weeds

Expected Future Conditions and Outputs

Containment and/or reduction of noxious weed infestations on BLM-administered lands using an integrated pest management approach.

Avoidance of the introduction or spread of noxious weed infestations in all areas.

Implementation Monitoring

Monitoring Question 1

Are noxious weed control methods compatible with Aquatic Conservation Strategy objectives?

Monitoring Requirement

Review the files of at least twenty percent of each year's noxious weed control applications to determine if noxious weed control methods were compatible with Aquatic Conservation Strategy objectives.

Monitoring Performed

Program and record review.

Findings

Noxious weed actions were implemented near Pacific City and in the Sandy River. Near Pacific City reed canary grass and Scotch broom was removed from approximately 70 acres. The area was replanted to native trees and shrubs. Japanese knotweed and other exotic species were treated in areas along the Sandy River. Records for both projects document consideration of ACS objectives.

Conclusion

RMP objectives were met.

Salem District
FY00 Annual Program Summary
APPENDICES

Glossary

AMA - Adaptive Management Area - The Salem District's Northern Coast AMA is managed to restore and maintain late-successional forest habitat while developing and testing new management approaches to achieve the desired economic and other social objectives.

Allowable Sale Quantity (ASQ) - An estimate of annual average timber sale volume likely to be achieved from lands allocated to planned, sustainable harvest.

Anadromous Fish - Fish that are hatched and reared in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon, steelhead, and shad are examples.

Archaeological Site - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

Area of Critical Environmental Concern (ACEC) - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect life and provide safety from natural hazards.

Best Management Practices (BMP) - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Biological Diversity - The variety of life and its processes, including a complexity of species, communities, gene pools, and ecological function.

Candidate Species - Plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Cavity Nesters - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

Commercial Thinning - The removal of merchantable trees from a stand to encourage growth of the remaining trees.

Connectivity - The Connectivity / Diversity lands are specific blocks spaced throughout the matrix lands, which have similar goals as matrix but have specific Standards & Guidelines which affect their timber production. They are managed on longer rotations (150 years), retain more green trees following regeneration harvest (12-18) and must maintain 25-30 percent of the block in late successional forest.

Cubic Foot - A unit of solid wood, one foot square and one foot thick.

Cumulative Effect - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Density Management - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics, if maintenance or restoration of biological diversity is the objective.

District Designated Reserves (DDR) - Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the ASQ.

Eligible River - A river or river segment, through an interdisciplinary team process and in some cases interagency review, found to meet Wild and Scenic River Act criteria of being free flowing and possessing one or more Outstandingly Remarkable Values.

Endangered Species - Any species defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

Environmental Assessment (EA) - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment; and whether a formal Environmental Impact Statement is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

General Forest Management Area (GFMA) (See Matrix) - This is the federal land not encumbered by any other land use designation, on which most timber harvest and silvicultural activities will be conducted.

Harvested Volume or Harvested Acres - Refers to timber sales where trees are cut and taken to a mill during the fiscal year. Typically, this volume was sold over several years. This is more indicative of actual support of local economies during a given year.

Hazardous Materials - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

Land Use Allocation (LUA) - Allocations which define allowable uses / activities, restricted uses / activities and prohibited uses / activities. Each allocation is associated with a specific management objective. Those discussed below include Matrix (or GFMA), Connectivity, LSR, and AMA.

Late-Successional Forests - Forest seral stages that include mature and old growth age classes.

LSR - Late Successional Reserve - Lands which are managed to protect and enhance old-growth forest conditions.

Matrix Lands - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

MMBF - Abbreviation for million board feet of timber.

Noxious Plant/Weed - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

O&C Lands - Public lands granted to the Oregon and California Railroad Company, and subsequently revested to the United States, that are managed by the Bureau of Land Management under the authority of the O&C Lands Act.

Offered (sold) Volume or Offered (sold) Acres - Any timber sold during the year by auction or negotiated sales, including modifications to contracts. This is more of a "pulse" check on the district's success in meeting ASQ goals than it is a socioeconomic indicator, since the volume can get to market over a period of several years. It should be noted that for this Annual Program Summary we are considering "offered" the same as "sold". Occasionally sales do not sell. They may be reworked and sold later or dropped from the timber sale program. Those sold later will be picked up in the APS tracking process for the year sold. Those dropped will not be tracked in the APS.

Off-Highway Vehicle (OHV) - Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain. The term, "Off Highway Vehicle" will be used in place of the term "Off Road Vehicle" to comply with the purposes of Executive Orders 11644 and 11989. The definition for both terms is the same.

> **Open:** Designated areas and trails where Off Highway Vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.
> **Limited:** Designated areas and trails where Off Highway Vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.
>
> **Closed:** Areas and trails where the use of Off Highway Vehicles is permanently or temporarily prohibited. Emergency use is allowed.

Outstanding Natural Area (ONA) - An area that contains unusual natural characteristics and is managed primarily for educational and recreational purposes.

Outstandingly Remarkable Values (ORV) - Values among those listed in Section 1 (b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values . . ." Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

Precommercial Thinning - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

Prescribed Fire - A fire burning under specified conditions that will accomplish certain planned objectives.

Probable Sale Quantity (PSQ) - An estimated volume that can be harvested from matrix and AMA lands based on certain computer modeling assumptions.

> **"Projected Acres"** are displayed by modeled age class for the decade. These "modeled" age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning, and density management harvest. Modeled age class acre projections may or may not correspond to "Offered" or "Harvested" age class acres at this point in the decade. Additional age classes are scheduled for regeneration, commercial thinning, and density management harvest at other points in the decade.

Regeneration Harvest - Timber harvest conducted with the partial objective of opening a forest stand to the point where favored tree species will be reestablished.

Regional Ecosystem Office (REO) - The main function of this office is to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the forest management plan can be successfully implemented.

Regional Interagency Executive Committee (RIEC) - This group serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the forest management plan standards and guidelines at the regional level.

Research Natural Area (RNA) - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

Resource Management Plan (RMP) - A general land use plan prepared by BLM under current regulations in accordance with the Federal Land Policy and Management Act.

Right-of-Way - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

Rural Interface Areas - Areas where BLM administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

Seral Stages - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

> **Early Seral Stage:** The period from disturbance to crown closure of conifer stands usually occurring from 0-15 years. Shrubs, grasses, and forbs, are plentiful.
>
> **Mid Seral Stage:** The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, shrubs, grasses, or forbs rapidly decrease in the stand. Hiding cover may be present.
>
> **Late Seral Stage:** The period in the life of a forest stand from first merchantability to culmination of Mean Annual Increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal.
>
> **Mature Seral Stage:** The period in the life of a forest stand from Culmination of Mean Annual Increment to an old growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.
>
> **Old Growth:** This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old growth stages.

Silvicultural Prescription - A detailed plan, usually written by a forest silviculturist, for controlling the establishment, composition, constitution, and growth of forest stands.

Site Preparation - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, herbicides, or a combination of methods.

SEIS Special Attention Species - A term which incorporates the "Survey and Manage" and "Protection Buffer" species from the Northwest Forest Plan. (RMP30)

Special Status Species - Plant or animal species in any of the following categories

* Threatened or Endangered Species
* Proposed Threatened or Endangered Species
* Candidate Species
* State-listed Species
* Bureau Sensitive Species
* Bureau Assessment Species

Target Volume - As used in this document, target volume refers to the volume to be offered for sale as directed by the annual budgeting documents for the district.

Visual Resource Management (VRM) - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Wild and Scenic River System - A National system of rivers or river segments that have been designated by Congress and the President as part of the National Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

Wild River: A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the Wild and Scenic Rivers System.

Scenic River: A river or section of a river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the National Wild and Scenic Rivers System.

Recreational River: A river or section of a river readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past. Designated recreational as part of the National Wild and Scenic Rivers System.

Acronyms/Abbreviations

ACEC ..... Area of Critical Environmental Concern
ACS ..... Aquatic Conservation Strategy
APS ..... Annual Program Summary
BA(s) ..... Biological Assessments
BLM ..... Bureau of Land Management
BMP(s) ..... Best Management Practices
BRD ..... Biological Resources Division of USGS
CBWR ..... Coos Bay Wagon Road
CON ..... Connectivity/Diversity Blocks
CERTs ..... Community Economic Revitalization Teams
CFER ..... Cooperative Forest Ecosystem Research
COPE ..... Coastal Oregon Productivity Enhancement Project
CT ..... Commercial Thinning
CX ..... Categorical Exclusions
CWA ..... Clean Water Act
CWD ..... Coarse Woody Debris
DEQ(ODEQ) ..... Oregon Department of Environmental Quality
DM ..... Density Management
DPS ..... Distinct Population Segment
EA ..... Environmental Analysis
EIS ..... Environmental Impact Statement
EPA ..... U.S. Environmental Protection Agency
ERFO ..... Emergency Relief Federally Owned
ERMA ..... Extensive Recreation Management Area
ESA ..... Endangered Species Act
ESU ..... Evolutionarily Significant Unit
FEIS ..... Final Environmental Impact Statement
FLPMA ..... Federal Land Policy and Management Act
FONSI ..... Finding of No Significant Impacts
FRESC ..... Forest & Rangeland Ecosystem Science Center
FS ..... Forest Service (USFS)
FY ..... Fiscal Year
GFMA ..... General Forest Management Area
GIS ..... Geographic Information System
GTR ..... Green Tree Retention
IDT ..... Interdisciplinary Teams
LSR ..... Late-Successional Reserve
LUA ..... Land Use Allocation
LWD ..... Large Woody Debris
MMBF ..... Million Board Feet
MOA ..... Memorandum of Agreement
MOU ..... Memorandum of Understanding
NEPA ..... National Environmental Policy Act

NFP (NWFP) ..... Northwest Forest Plan
NMFS ..... National Marine Fisheries Service
O&C ..... Oregon and California Revested Lands
ODF ..... Oregon Department of Forestry
ODFW ..... Oregon Department of Fish and Wildlife
OSU ..... Oregon State University
PACs ..... Province Advisory Councils
PD ..... Public Domain
PGE ..... Portland General Electric
PILT ..... Payment in Lieu of Taxes
PL ..... Public Law
PSQ ..... Probable Sale Quantity
RA ..... Resource Area
REO ..... Regional Ecosystem Office
RIEC ..... Regional Interagency Executive Committee
RMP ..... Resource Management Plan
RMP/ROD ..... The *Salem District RMP* and *Record of Decision*
RO ..... Forest Service Regional Office
ROD ..... Record of Decision
RPA ..... Reserve Pair Area
RR ..... Riparian Reserve
R/W ..... Right-of-Way
SEIS ..... Supplemental Environmental Impact Statement
S&G ..... Standard and Guideline
S&M ..... Survey and Manage
SRMA ..... Special Recreation Management Area
TMO ..... Timber Management Objective(s)
TMP ..... Transportation Management Plan
TPCC ..... Timber Productivity Capability Classification
UO ..... University of Oregon
USDA ..... U.S. Department of Agriculture
USDI ..... U.S. Department of Interior
USFS ..... U.S. Forest Service
USFWS ..... U.S. Fish and Wildlife Service
USGS ..... U.S. Geological Survey
WC ..... Watershed Council
WFSA ..... Wildfire Situation Analysis
WQMP ..... Water Quality Management Plan

Appendix 1 - SUMMARY OF SPECIAL FOREST / NATURAL PRODUCT ACTIONS

RMP Authorized Product Sales	Unit of Measure	FY 1996 - 2000 Units/Contracts/Value	FY 200 Units/Contracts/Value	Six Year TOTAL Units/Contracts/Value
Boughs	Pounds	467,410 pounds, 90 contracts, $32,901.50	92,810 pounds, 21 contracts, $11,178.10	560,220 pounds, 111 contracts, 44080
Burls and Miscellaneous	Pounds	1,535.7 pounds, 2 contracts, 220	0 pounds, 0 contracts, 0	1,535.7 pounds, 2 contracts, 220
Christmas Trees	Number	10 trees, 7 contracts, 61	8 trees, 6 contracts, 80	18 trees, 13 contracts, 141
Edibles and Medicinals	Pounds	28,079.3 pounds, 41 contracts, 1244	0 pounds, 0 contracts, 0	28,079.3 pounds, 41 contracts, 1244
Feed and Forage	Tons	365.1 tons, 37 contracts, 2979	0 tons, 0 contracts, 0	365.1 tons, 37 contracts, 2979
Floral and Greenery	Pounds	575,963.5 pounds, 439 contracts, $46,348.73	266,250.0 pounds, 121 contracts, $18,873.50	842,213.5 pounds, 560 contracts, $65,222.23

RMP Authorized Product Sales	Unit of Measure	FY 1996 - 2000 Units/Contracts/Value	FY 200 Units/Contracts/Value	Six Year TOTAL Units/Contracts/Value
Moss and Bryophytes	Pounds	705,622.5 pounds, 527 contracts, $35,591.14	115,329 pounds, 87 contracts, $4,614.70	820,951.5 pounds, 614 contracts, $40,205.84
Mushrooms and Fungi	Pounds	86,998.6 pounds, 698 contracts, $11,744.44	26,573.3 pounds, 206 contracts, $3,588.31	113,571.9 pounds, 904 contracts, $15,332.75
Ornamentals	Number	500 plants, 1 contract, $10.00	0 plants, 0 contracts, $0.00	500 plants, 1 contract, $10.00
Seed and Seed Cones	Bushels	684.5 bushels, 13 contracts, $903.45	990 bushels, 6 contracts, $1,037.00	1,674.5 bushels, 19 contracts, $1,940.45
Transplants	Number	42,484 plants, 94 contracts, $6,952.71	6,523 plants, 12 contracts, $235.00	49,007 plants, 106 contracts, $7,187.71
Wood Products and Firewood	Cubic Feet	267,099.1 cu. ft., 786 contracts, $38,876.63	45,487.9 cu. ft., 128 contracts, $4,112.20	312,587.0 cu. ft., 914 contracts, $42,988.83
TOTALS		2,735 contracts, $177,833	593 contracts, $51,278	3,328 contracts, $229,110

* - Contract numbers represent individual sale (or free use) actions. **Value** is in dollars per year received.
** To avoid double counting, this line does not include sawtimber which is reported elsewhere.

Above is Appendix 1 (Continued)

Appendix 2 - LAND ACQUISITIONS BY EXCHANGES OR PURCHASE FY 95-01

Name	Case File Number	Date	Acres Acquired	Acres Conveyed	Remarks
Aims Exchange	OR50799	2/24/1995	0	27.09	BLM acquired 48.80 acres is Perpetual Scenic Easement to facilitate implementation of the Sandy Wild& Scenic River Mgt. Plan.
Sandy Exchange	OR50419	3/7/1995	80.85	0	5 acres of timber only conveyed in return for the acquired acreage. Acreage acquired to facilitate implementation of the Sandy River Mgt. Plan.
Rocky Top Exchange	OR50847	8/3/1995	142.82	110	Exchange to consolidate ownership and acquire a Bald Eagle Nest Site.
River Trail Exchange	OR51155	5/7/1996	154.41	80	Exchange to obtain access for proposed Molalla River Trail.
Little N.Fk.Wilson River Exchange	OR51231	6/26/1996	525.01	489.93	Exchange to obtain high quality Marbled Murrelet, Spotted Owl and Salmon Habitat.
Wildwood Exchange	OR52446	3/11/1998	89.07	80	Also acquired 8.12 acre Perpetual Trail Easement
Mt.Hood Corridor Exchange	OR53235	1/12/1998	3531.65	1453.52	Exchange completed per Title IV of the Omnibus Consolidated Appropriations Act for FY 1997. Lands are in view shed of Mt.Hood Corridor.
Fishermens Bend (Frank Trucking)	OR55115	9/24/2001	17.74	0	Purchased with Land and Water Conservation Funds
Sandy River (Prochnau)	OR56328	9/24/2001	152.27	0	Purchased with Land and Water Conservation Funds
Sandy River (PGE)	OR56330	9/21/2001	60	0	Purchased with Land and Water Conservation Funds
Totals			4524	2241	Net Acreage increase to BLM of 2,513.28 Acres

Source: Serial Register of Realty Cases - Salem District

Appendix 3 - LAND SALES FY 95-01

No Additions to this table for fiscal year 2001

These land sales were isolated parcels of BLM ownership that were targeted for disposal (land tenure zone 3), or minor sales completed to resolve occupancy trespasses.

Purchaser	Serial Number	Date	Acres Sold
Peter Boden	OR51166	9/25/95	0.43
Robert Dersham	OR51291	2/23/95	0.80
Caffall Brothers	OR51890	1/9/96	2.44
Ray Johnson	OR51998	10/17/95	0.15
Clem Lulay	OR52096	5/26/96	0.19
Clara Taylor	OR52165	10/17/95	0.46
Ervin Simmons	OR52166	10/17/95	0.38
Robert Mommson	OR52644	1/24/97	0.20
Stimson Lmbr. Co.	OR53113	8/28/97	0.15
Stimson Lmbr. Co.	OR53114	8/28/97	0.60
Morrow For.Pds.	OR53115	11/19/97	1.00
Morrow For.Pds.	OR53116	11/19/97	2.10
Morrow For.Pds.	OR53117	11/19/97	2.60
City of McMinnville	OR54442	6/16/98	3.79
Susi K. Trattner	OR53611	11/6/98	0.19
Konstantin Verbin	OR53985	4/29/99	0.34
		Total Acres Sold	15.82

Appendix 4: Resident Labor Force, Employment by Industry, Oregon

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	1,640,000	1,652,700	1,719,700	1,727,700	1,763,700	1,760,500	1,802,900
Unemployment	89,000	80,100	101,600	100,700	98,600	100,400	87,500
Total Wage and Salary Emp.	1,362,900	1,418,400	1,474,600	1,526,400	1,551,800	1,572,400	1,603,300
Total Manufacturing	221,300	229,300	235,800	243,600	246,100	240,800	243,000
>Lumber & Wood Products (& Pa	63,300	61,300	59,800	60,200	59,000	57,300	56,900
>Other Manufacturing	158,000	168,000	176,000	183,400	187,100	183,500	186,100
Total Non-Manufacturing	1,141,600	1,189,100	1,238,900	1,282,800	1,305,700	1,331,600	1,360,300
>Const. & Mining	62,900	70,400	79,400	83300	83,400	84,700	87,600
>Trans., Comm. & Utilities	68,900	71,300	73,500	74900	76,200	77,700	79,900
>Trade	344,100	357,000	365,900	377500	383,400	387,900	394,000
>Finance, Ins. & Real Est.	87,800	87,200	91,000	94800	95,200	95,400	94,000
>Services & Misc.	343,200	362,900	382,600	402800	412,100	425,400	438,800
>Government	234,700	240,200	246,600	249500	255,300	260,500	266,000

Appendix 5: Resident Labor Force, Employment by Industry, Benton County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	39,410	41,170	42,680	42,270	42,160	40,790	39,890
Unemployment	1,010	910	1,150	1,050	1,290	1,200	970
Total Wage and Salary Emp.	34,670	37,100	38,540	39,340	38,710	36,580	36,530
Total Manufacturing	7,090	8,130	8,840	9,300	8,580	7,380	7,040
>Lumber & Wood Products	1,130	1,010	1,030	1,070	920	770	730
>Other Manufacturing	5,960	7,120	7,810	8,230	7,660	6,610	6,310
Total Non-Manufacturing	27,590	28,970	29,700	30040	30,140	29,200	29,500
>Const. & Mining	800	860	960	980	1,060	990	950
>Trans., Comm. & Utilities	930	950	940	930	950	950	900
>Trade	5,390	5,680	6,010	6030	6,160	6,070	6,190
>Finance, Ins. & Real Est.	1,370	1,440	1,400	1290	1,180	1,180	1,210
>Services & Misc.	7,570	8,290	8,600	8970	8,880	8,910	8,920
>Government	11520	11760	11810	11860	11,890	11,100	11,340

Appendix 6: Resident Labor Force, Employment by Industry, Clatsop County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	17,380	17,250	17,520	17,630	17,670	17,170	17,490
Unemployment	1,100	870	1,110	1,180	1,050	970	810
Total Wage and Salary Emp.	14,140	14,530	14,680	15,190	15,310	15,200	15,440
Total Manufacturing	2,710	2,620	2,670	2,630	2,510	2,500	2,500
>Lumber & Wood Products	1,650	1,600	1,630	1,670	1,630	1,640	1,570
>Other Manufacturing	1,060	1,020	1,040	960	880	860	930
Total Non-Manufacturing	11,430	11,910	12,010	12,560	12,790	12,700	12,940
>Const. & Mining	570	600	620	630	680	720	720
>Trans., Comm. & Utilities	520	530	500	480	500	490	480
>Trade	4,170	4,320	4,290	4,290	4,260	4,300	4,360
>Finance, Ins. & Real Est.	600	590	550	560	560	550	480
>Services & Misc.	3,130	3,410	3,520	3,940	4,080	3,910	4,130
>Government	2,440	2,460	2,520	2,650	2,710	2,730	2,770

Appendix 7: Resident Labor Force, Employment by Industry, Columbia County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	20,640	20,650	21,840	22,160	22,730	22,720	23,480
Unemployment	1,340	990	1,340	1,360	1,330	1,400	1,210
Total Wage and Salary Emp.	8,830	9,090	9,450	9,770	9,950	10,070	10,370
Total Manufacturing	2,170	2,240	2,290	2,320	2,230	2,220	2,260
>Lumber & Wood Products	1,420	1,510	1,470	1,460	1,410	1,400	1,430
>Other Manufacturing	750	730	820	860	820	820	830
Total Non-Manufacturing	6,660	6,840	7,170	7,450	7,710	7,850	8,110
>Const. & Mining	440	490	520	560	570	580	700
>Trans., Comm. & Utilities	680	670	710	700	800	840	780
>Trade	1,920	1,940	2,050	2,230	2,300	2,350	2,530
>Finance, Ins. & Real Est.	380	390	400	410	410	390	370
>Services & Misc.	1,360	1,450	1,530	1,600	1,600	1,660	1,660
>Government	1,880	1,900	1,960	1,960	2,030	2,030	2,060

Appendix 8: Resident Labor Force, Employment by Industry, Lincoln County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	20,990	21,040	21,720	21,520	21,650	21,090	21,080
Unemployment	1,270	1,480	1,620	1,850	1,680	1,740	1,320
Total Wage and Salary Emp.	15,780	16,020	16,670	16,780	16,970	16,780	17,070
Total Manufacturing	1,630	1,540	1,470	1,360	1,320	1,320	1,360
>Lumber & Wood Products	890	820	780	710	700	720	730
>Other Manufacturing	740	720	690	650	620	600	630
Total Non-Manufacturing	14,150	14,480	15,210	15,420	15,650	15,460	15,710
>Const. & Mining	700	770	780	760	710	700	730
>Trans., Comm. & Utilities	450	470	520	530	530	510	490
>Trade	5,050	5,040	5,170	5,280	5,170	5,140	5,170
>Finance, Ins. & Real Est.	930	870	850	820	790	780	730
>Services & Misc.	3,790	3,800	3,950	3,960	4,210	4,010	4,350
>Government	3,230	3,540	3,950	4,070	4,230	4,320	4,240

Appendix 9: Resident Labor Force, Employment of Industry, Linn County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	47,890	49,220	52,210	52,050	53,530	52,740	52,010
Unemployment	3,370	2,990	3,650	3,820	4,680	4,200	3,670
Total Wage and Salary Emp.	35,740	37,850	39,900	41,070	41,120	41,090	40,430
Total Manufacturing	10,620	11,200	11,740	12,190	11,690	11,190	10,500
>Lumber & Wood Products	5,010	4,910	5,020	5,110	4,920	4,730	4,420
>Other Manufacturing	5,610	6,290	6,720	7,080	6,770	6,460	6,080
Total Non-Manufacturing	25,120	26,650	28,170	28,890	29,430	29,900	29,940
>Const. & Mining	1,770	1,990	2,330	2,450	2,480	2,730	2,550
>Trans., Comm. & Utilities	1,620	1,660	1,730	1,790	1,960	2,150	2,140
>Trade	7,870	8,110	8,580	8,910	9,080	8,970	8,900
>Finance, Ins. & Real Est.	1,270	1,310	1,410	1,470	1,380	1,330	1,380
>Services & Misc.	6,710	7,450	7,780	7,880	7,970	8,040	8,290
>Government	5,870	6,140	6,340	6,390	6,560	6,670	6,680

Appendix 10: Resident Labor Force, Employment by Industry, Tillamook County

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	10,830	10,900	11,420	11,120	11,210	11,280	11,290
Unemployment	520	540	680	730	680	590	500
Total Wage and Salary Emp.	7,070	7,250	7,620	7,570	7,660	7,980	7,930
Total Manufacturing	1,320	1,310	1,350	1,340	1,370	1,420	1,460
>Lumber & Wood Products	560	540	540	520	540	560	550
>Other Manufacturing	760	770	810	820	830	860	910
Total Non-Manufacturing	5,750	5,940	6,270	6,230	6,300	6,560	6,470
>Const. & Mining	220	250	260	270	310	310	320
>Trans., Comm. & Utilities	270	280	280	270	260	280	270
>Trade	1,800	1,810	1,980	1,950	1,930	1,910	1,840
>Finance, Ins. & Real Est.	310	320	330	370	350	330	310
>Services & Misc.	1,530	1,680	1,780	1,700	1,720	1,950	1,890
>Government	1,620	1,600	1,640	1,690	1,730	1,780	1,840

Appendix 11: Resident Labor Force, Employment by Industry, Salem Metropolitan Statistical Area

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	158,600	158,700	164,500	164,200	169,000	168,100	175,600
Unemployment	8,400	7,300	9,400	9,600	9,300	10,300	9,500
Total Wage and Salary Inc.	120,800	124,500	128,400	131,400	134,400	135,800	138,700
Total Manufacturing	17,300	17,800	17,900	17,900	18,300	17,700	17,700
>Lumber & Wood Products	4,100	4,200	4,000	4,000	4,400	4,300	4000
>Other Manufacturing	13,200	13,600	13,900	13,900	13,900	13,400	13,700
Total Non-Manufacturing	103,500	106,800	110,600	113,500	116,100	118,100	121,000
>Const. & Mining	6,000	6,500	7,100	7,800	7,800	7,900	8,200
>Trans., Comm. & Utilities	3,500	3,500	3,600	3,600	3,900	4,000	4,500
>Trade	26,400	27,400	27,600	27,800	28,400	28,600	29,200
>Finance, Ins. & Real Est.	6,700	6,500	6,500	6,600	6,800	6,900	6,700
>Services & Misc.	27,700	29,000	30,100	31,000	31,800	32,300	33,200
>Government	33,200	33,900	35,700	36,700	37,500	38,600	39,200

Appendix 12: Resident Labor Force, Employment by Industry, Portland Primary Metropolitan Statistical Area

(Clackamas, Multnomah, Washington and Yamhill Counties, Oregon, and Clark County, WA)

	1994	1995	1996	1997	1998	1999	2000
Civilian Labor Force	936,500	956,500	1,001,900	1,024,800	1,046,900	1,047,200	1,802,900
Unemployment	40,300	35,500	45,400	44,000	44,800	47,100	87,500
Total Wage and Salary Emp.	802,100	839,600	879,000	916,700	932,900	945,800	1,603,300
Total Manufacturing	129,900	137,200	142,000	147,300	149,200	145,100	243,000
>Lumber & Wood Products	16,400	16,400	15,900	15,800	15,700	15,100	56,900
>Other Manufacturing	113,500	120,800	126,100	131,500	133,500	130,000	186,100
Total Non-Manufacturing	672,200	702,400	737,000	769,400	783,700	800,700	1,360,300
>Const. & Mining	40,500	45,400	52,100	55,100	54,400	53,400	87,600
>Trans., Comm. & Utilities	45,600	48,400	50,800	52,400	53,900	55,100	79,900
>Trade	203,600	210,800	218,300	227,700	231,300	234,700	394,000
>Finance, Ins. & Real Est.	61,500	60,200	63,600	66,700	67,100	66,600	94,000
>Services & Misc.	213,000	227,500	238,600	252,500	259,300	268,200	438,800
>Government	108,100	110,100	113,600	114,800	117,800	122,700	266,000